ASL

Australian Society for Limnology Inc.

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AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

The Australian Society for Limnology (ASL) is an Australian-based scientific society whose focus is the study and management of inland waters. The ASL was established in 1961, and has a current membership of over 650 researchers, managers, engineers, teachers and tertiary level students from all states and territories. Members have a strong professional interest in inland aquatic issues, including the maintenance of biodiversity, the maintenance and/or restoration of water quality, and the wise use of aquatic resources. The Society also has a strong interest in fostering the scientific and intellectual development of tertiary students.

The Society includes members' working in government agencies, tertiary institutions and many industries related to aquatic resources. Through their daily activities, members have contact with local communities and are in a sound position to interpret and advise on inland water issues. The Society has a substantial knowledge base, and has assumed a responsibility to ensure that this is available to those who manage inland waters.

Accordingly, the charter of the ASL is to further our understanding of Australia's inland waters and to promote their wise use and sustainable management. In this manner we will contribute to the continued existence of this valued resource and the maintenance and enhancement of the quality of life for all Australians. The ASL regularly produces a newsletter with notes on limnological activities, articles of interest, book reviews and announcements of upcoming events likely to be of interest to Members.

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Material for publication in the **Volume 41 # 3 Issue** of the Newsletter should be sent to the Editor (Address on back page) by **Friday 29th August 2003.**

Volume 41 # 4 contributions are due **Friday 28th November 2003.**

All articles should be forwarded, if possible, as unformatted text on a disk or via email.

ASL Home Page - http://www.asl.org.au/

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Membership Information and contact details of the Regional Executive Members can be found at the back of this Newsletter.

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FROM THE EDITOR

Thanks to everyone who has helped with this issue, particularly the 'normal' contributors for their assistance and many contributions. Welcome back to some of groups who we haven't heard from for a long time.

A newsletter is only as good as its contributions, so we'd love to hear from you for the next edition of the newsletter. We will take anything of interest to network members; news items, articles on research projects, reports on activities, as well as details about upcoming workshops, seminars, conferences etc. We welcome all suggestions for improving the content and layout to make it a useful and pleasurable read.

We want to hear from you!

Please send your items to me, Rhonda Sinclair, at Rhonda.Sinclair@csiro.au. You can also ring me on (02) 6058 2331.

Deadline for the next issue is Friday 29 August 2003.

Cheers

Rhonda Sinclair

PRESIDENT'S REPORT

Greetings all,

Plans have been racing ahead for the annual congress in Warrnambool and it is shaping up to be a beauty, especially with the chance to mix with our New Zealand colleagues. So I encourage you to start to think about your plans for December. There will also be the Bill Williams symposium in Adelaide just beforehand with a splendid list of limnological luminaries in science and management ready to talk about pressing issues and recent research in Australia and overseas. It is a great way to honour the contributions that Bill made to global limnology, and promises to be an entertaining 'curtain raiser' for the congress. So why not plan to attend both events and have a great aquatic start to the final month of 2003? And bring lots of students. I am looking forward to the boat cruise and mixer for the opportunity to meet students attending ASL this year, especially those newly embarking on their limnological career.

My other plea is to remind you about nominating worthy candidates for this year's **ASL Early Career Excellence Award**. As you know, this prize aims to reward and encourage excellence by an early career limnologist who has contributed substantially to Australian limnology and/or aquatic ecosystem management. "Early career" is defined broadly as less than some 10 years of involvement in a limnological career, and could be judged as commencing with postgraduate work in limnology or membership of ASL. The judges would seek evidence of professional limnological excellence, potentially including successful completion of a Masters or PhD thesis in limnology within the last 10-15 years and tangible evidence of excellence represented by one or a combination of: high quality published papers or other scholarly media; substantial improvements in 'on-ground' water resource management; peer recognition by invitations to speak at congresses or to contribute to special session; overseas experience applied to Australian limnology; excellence in communication, extension and education in limnology. So if you know of someone who would nicely fit this bill, check out the website or contact me for more details, and put together a nomination to reach me by no later than the end of June. Last year's winner, Justin Brookes, will be giving a talk at Warrnambool and we would like to see a steady stream of Excellence Award winners for the next few decades!

And some good news for those of you trying to save the pennies but keep up with the literature! Outcomes of discussions between the ASL Executive and the Management Board of *Marine and Freshwater Research* have resulted in a bargain offer for ASL members to receive the online edition of *MFR* at a discounted rate of $100 for a full year's subscription (> 1000 pages of scientific papers annually and online access to all *MFR* papers published since 1997). *MFR*, now under a new Editor (see elsewhere in this newsletter), will also give an annual prize at the ASL Congresses. At this stage, it is envisaged that the prize would be for the poster that best reflects *MFR*'s scope as an example of a blend of pure and applied freshwater science.

Andrew Boulton

* * * * NEWS UPDATE * * * *
MARINE & FRESHWATER RESEARCH

In 2002, after more than 15 successful years as Managing Editor of *Marine and Freshwater Research*, Ann Grant retired. She was instrumental in shaping *MFR* into the high-quality journal, with its international reach and scope, which it is today. In early 2003, I was appointed the new Managing Editor of *MFR*, my main aim being to continue the strong traditions that characterise *MFR*, while ensuring its development as a vital resource for researchers in the aquatic realm.

I see one of the great strengths of the journal being its broad scope and wide circle of readers, contributors, subscribers and referees. The submission of studies from any area of the aquatic sciences is welcome. I, together with the Editorial Advisory Committee and the International Advisory Panel, particularly encourage studies that are not only original, significant and substantial contributions to existing knowledge, but also those that are interdisciplinary in nature. I want to facilitate the development of *MFR* into a journal that is required reading by researchers in the aquatic sciences the world over. I hope to do this with the use of invited reviews and special issues and by encouraging studies that strive to encompass different subject areas.

From my experience as an author, and from talking at length with various research groups, I believe there are three important factors that contribute to the decision of where an author submits a manuscript: impact factor, turnaround time, and the perceived readership of the journal. I can proudly report that the impact factor of *MFR* has steadily increased over the last few years and is now over 1.0. I aim to have the turnaround time from submission to first decision down to 8 weeks and from acceptance to publication down to 12 weeks. This will be achieved through the increased use of electronic forms of communication, and in conjunction with the new Production Editor of *MFR*, Melissa Storey. There is a wide readership of *MFR* - I can report that over 80% of our subscribers are from overseas, and web-hit statistics show a healthy interest in the journal from all quarters of the globe. The referees are from many countries, as are the authors of the submitted and published papers.

Finally, the Executive of the ASL and the management of *MFR* are working hard to forge links between the two organizations. I am happy to report two outcomes of this collaboration. First, there will be an *MFR* prize given at the annual Congress (see elsewhere in this edition for details). Second, ASL members can subscribe, through the society, to the online edition of *MFR* at a discounted rate - under $100 for a full year's subscription, which includes over 1,000 pages of current scientific papers and online access to all papers published since 1997. This offer is available for the 2004 volume of *MFR*. Contact the society for further details.

I encourage your submissions to *MFR* and look forward to being able to work with you in the future.

Dugald McGlashan
Managing Editor, *Marine and Freshwater Research*
Email: dugald.mcglashan@csiro.au

* * * ANNOUNCEMENT * * *

"The *Marine and Freshwater Research* Prize for the Best Interdisciplinary Poster"

This prize has been instigated to further the links between the ASL and *MFR*. The aim is to encourage studies that have a demonstrated 'interdisciplinary' connection, which is a major focus of the journal. The reward will go to the poster presentation that impresses the judging panel the most in this regard.

The panel will be made up of the President of the ASL, the Managing Editor of *MFR* and a mutually agreed third person. All members of the ASL are eligible for the prize. The prize is a years subscription to MFR, and the prize-winner will be encouraged to submit a manuscript to *MFR* for consideration.

Australian Wetlands Forum 3

13 June 2003

Australian Wetlands Forum 3 - Linking the Ramsar Convention to local wetlands.

The Third Australian Wetlands Forum will be held on 13 June 2003 at Banrock Station Wine and Wetlands Centre. The forum will raise national awareness on Wetland issues and focus on the following:

- Provide feedback and discuss the implications of resolutions made at the Ramsar Conference of Parties 8 in Spain November 2002;
- Discuss the implications of the environmental protection and biodiversity conservation Act for wetland protection and management;
- Provide linkages to the wetland outreach program for partner organisations;
- Further development of the resolutions of the Australian Wetlands Forum 2.

The forum will also provide a celebration of the recent awarding of Ramsar Awards to Banrock Station Wines, a Wetland Care Australia major sponsor and to Dr Max Finlayson, a Specialist Advisor to Wetland Care Australia.

Announcing the 2002 awards, the Ramsar Bureau said Banrock Station had been chosen because of its innovative approach to supporting the sustainable use of wetland resources.

Australian scientist, Dr Max Finlayson, has also been rewarded for his outstanding contribution to wetlands with a Recognition of Excellence Award as part of the 2002 awards.

Additional information can be obtained by contacting our office in Ballina, by phone (02) 6681 6069 or email ballina@wetlandcare.com.au

JOINT CONGRESS ASL/NZLS ~ WARRNAMBOOL 2003

The Joint Congress of ASL and NZLS will be held from 1 - 5 December 2003 on the campus of Deakin University, Warrnambool, Victoria. Warrnambool is a seaside town on the south-west coast of Victoria, about 3 hours drive from Melbourne, 3 hours by train, or 6 hours from Melbourne via the Great Ocean Road.

The Congress venue is Deakin University, whose campus is on the Princes Hwy on the eastern edge of Warrnambool. Accommodation will be available on campus, and a wide variety of alternatives are available in the town. Warrnambool has 29,000 residents with a wide range of facilities, including restaurants and pubs. Daily temperatures in December range from an average maximum of 25°C to an average minimum of 12°C. Warrnambool has a maritime climate, so considerable variations upon these averages are possible and it would be wise to bring warm clothing and a raincoat as well as summer attire.

Registrations will open on the ASL website by 23rd June: www.asl.org.au

ASL subscribers will receive a paper copy of the registration form with their annual subscription notice. We would prefer delegates to use the web registration wherever possible. Early registration and abstracts will be due by 1 September.

REGISTRATION FEES:

Member Registration - due by 1 September	A$220
Student member Registration - due by 1 September	A$150
Non-member Registration - due by 1 September	A$270
Single day Registration - due by 1 November	A$ 50
Late Registration - due by 1 November	A$320

Please Note: the venue for this Congress has an upper limit on the numbers of delegates and we may be forced to refuse registrations exceeding this number. Registration includes a registration pack and book of abstracts, all morning and afternoon teas, lunches on three days, the registration mixer, the BBQ and poster session drinks. Further details will be available on the website after 23rd June.

The Congress will have an open format, with oral presentations divided into common themes and a dedicated poster session. There will be a Plenary Session on the first morning (2nd December) featuring presentations by award winners from both Societies. Following this, concurrent sessions will be run with 15 minute seminar slots (12 mins + 3 mins for questions). Further details will be available on the website.

Congress Timetable

The Congress will commence with registration on Monday 1st, and a registration mixer from 6pm. Sessions will be held all day on Tuesday 2nd, Wednesday 3rd and Friday 5th, and also in the morning of Thursday 4th. There will be a BBQ on the Tuesday night and the Congress dinner on Thursday night. A variety of post-Congress tours and evening activities will be offered at additional cost. See website for further details.

Accommodation

Accommodation is available on campus in the student residences. Cost is A$50 per night for bed and light breakfast (breakfast materials supplied). Accommodation in the residences is limited and will be allocated on a first come first served basis. Warrnambool is a seaside holiday town with many other accommodation options (see website or automobile club guides).

Transport – Own Arrangements

Air Travel and Trains

You will need to make your own arrangements for air travel. The nearest airport is Melbourne (Tullamarine) Airport. Shuttle buses run 24 hours/day from Tullamarine to Spencer Street Station at a cost of around A$20. Allow at least 2½ hours between arrival at Tullamarine and Spencer Street Station for your connecting train. Trains to Warrnambool depart three times per day. Further details are available on the ASL website or at www.vlinepassenger.com.au

Travel within Warrnambool

One way taxi fares between Deakin University campus and the city centre are around A$10. There is also an hourly bus service between 8am and 6pm, Monday to Friday.

Car Hire and Touring Options

The Great Ocean Road lies between Warrnambool and Melbourne, and is one of Australia's most spectacular drives, taking about 6 hours (this timeframe does not allow for stopping or sightseeing). We recommend that this route be taken over a 2 day period, stopping overnight in the towns of Lorne or Apollo Bay. Hiring a car in Melbourne or driving from within Australia is an attractive option if you take this drive. You could also visit other tourist destinations close to Warrnambool (including Coonawarra, Pyrenees or McLaren Vale wine regions, Grampians National Park or Narracoorte Caves World Heritage area). For further information see www.warrnamboolinfo.com.au and related links. Parking will be available on campus at A$2.50 per day.

Childcare

Childcare will be available at the Sherwood Park Daycare Centre on campus. The centre caters for children from 0-5 years of age No care will be provided for children over 5 years. Further details will be available on the ASL website.

Cheers,

Belinda Robson [brobson@deakin.edu.au]

STUDENT TRAVEL AWARDS

Applications are invited from research students for travel assistance to attend and present a paper or poster at the Annual Congress of the Australian Society for Limnology. The purpose of this assistance is to encourage students to present the results of their work in public. Students who are carrying out research in any branch of limnology for a higher degree are encouraged to apply.

The following rules apply for assistance:

1. Applicants must be full-time postgraduate students at any Australian University. There is no age limitation. Applicants must have current financial membership of the ASL for at least 6 months.

2. Assistance will be granted on the recommendation of a panel of three appointed by the Society.

3. Applications must include a written statement of no more than 200 words describing the research, its significance and the stage that has been reached. This statement must be endorsed by the student's supervisor. An abstract of the paper that the applicant proposes to present must also be included.

4. Award of assistance will be judged on: (i) significance of the work; (ii) originality and soundness of the research; (iii) the progress made and whether the stage has been reached where something useful can be presented; (iv) ability to present a clear and concise statement of the study.

5. Applications must be lodged with Dr Richard Marchant, Museum of Victoria, GPO Box 666E, Melbourne VIC 3001, by 1 October 2003. Applications can also be sent by email to rmarch@museum.vic.gov.au

AUSTRALIAN SOCIETY FOR LIMNOLOGY

EARLY CAREER EXCELLENCE AWARD

CALL FOR NOMINATIONS

The Australian Society for Limnology Early Career Excellence Award aims to reward and encourage excellence by an early career limnologist who has contributed substantially to Australian limnology and/or aquatic ecosystem management. "Early career" is defined broadly as ≤ 10 years of involvement in a limnological career, and could be judged as commencing with postgraduate work in limnology or membership of ASL.

Any early career researcher who is a member of ASL may be nominated for the Award. Nominations may only be made by financial members of the Society and will hold for up to three years after nomination. The nomination must be in writing, confidential, and must be seconded by a financial member of the Society. Nominations must address the relevant selection criteria and a current copy of the nominee's CV should be included to support the case if deemed appropriate. Each nomination will be assessed by a Committee of ASL, which is chaired by the President.

An award is not necessarily made each year. Nominations for the Early Career Excellence Award are accepted at any time, but for the Award to be made for that year, the nomination must be made three months before the Congress. For consideration for the 2003 Congress, the closing date for nominations is Friday 29 August 2003.

Nominations should be forwarded to Assoc. Professor Andrew Boulton, (President of ASL), Ecosystem Management, The University of New England, Armidale NSW 2351.

Guidelines and Criteria for the Early Career Excellence Award are attached on the Pages 15 and 16.

AUSTRALIAN SOCIETY FOR LIMNOLOGY MEDAL

CALL FOR NOMINATIONS

The Australian Society for Limnology Medal commemorates Hilary Jolly, a founding member of the Australian Society for Limnology, and is presented to a person who in the opinion of the Society, has made an outstanding contribution to Australian Limnology. The ASL Medal (formerly the Jolly Award) has become ASL's (and arguably Australia's) most prestigious prize in limnology, considered by members to indicate overall scientific excellence and outstanding achievement.

Any person may be nominated for the Medal, but nominations may only be made by financial members of the Society. The nomination must be in writing and must be seconded by a financial member of the Society. Nominations must address the relevant selection criteria and a current copy of the nominee's CV should be included if deemed appropriate. Each nomination will be assessed by a Committee of ASL which is chaired by the President.

An award is not necessarily made each year. Nominations for the Medal are accepted at any time, but for the Medal to be made for that year, the nomination must be made three months before the Congress. For consideration for the 2003 Congress, the closing date for nominations is Friday 29 August 2003.

The full regulations governing the Medal are outlined below.

Nominations should be forwarded to Assoc. Professor Andrew Boulton, (President of ASL), Ecosystem Management, The University of New England, Armidale NSW 2351.

The Regulations and Guidelines governing the ASL Medal are outlined on Pages 17 and 18.

THE ASL EARLY CAREER EXCELLENCE AWARD

PREAMBLE

At the ASL congress in Darwin in 2000, it was suggested that ASL consider providing an award to encourage and reward 'young achievers' in the field of limnological excellence. This could be analogous to the Hynes Award offered by the North American Benthological Society for "excellence in benthic research by an investigator who has recently completed a degree program". Terms and a name for this Award were discussed at the AGM of ASL in Moama in 2001, and the Award was given for the first time in 2002. The following guidelines were developed with a view to maintaining a consistent procedure for the Society for awarding the Australian Society for Limnology Early Career Excellence Award.

AIM OF THE AWARD

The Award aims to recognize and encourage excellence by an early career limnologist (defined below) who has contributed substantially to Australian limnology and/or aquatic ecosystem management.

GUIDELINES

"Early career" is defined broadly as $\leq$ 10 years of involvement in a limnological career, and could be judged as commencing with postgraduate work in limnology or membership of ASL. This guideline would be applied at the discretion of the Committee but seeks to differentiate contenders from those for the ASL Medal who are commonly more senior in their career.

Criteria for the Award include:

(i) Current financial membership of ASL;
(ii) Evidence of professional limnological excellence, potentially including successful completion of a Masters or PhD thesis in limnology within the last 10-15 years;
(iii) Tangible evidence of excellence represented by one or a combination of: high quality published papers or other scholarly media; substantial improvements in 'on-ground' water resource management; peer recognition by invitations to speak at conferences or to contribute to special session; overseas experience applied to Australian limnology; excellence in communication, extension and education in limnology.

PROCESS OF SELECTION

Confidential nominations by a member of ASL and seconded by another financial member, must be made to the President. To be considered for a given year's Award, the nomination must be sent to the President at least three months before the Annual Congress. The written nomination must include evidence for the above criteria but must be kept confidential from the nominee, and could include a current CV to support the case if deemed appropriate. Nominations will be called for each year and an application will hold valid for three years unless successful. There need not be an Award made every year. The winner will be announced at the Annual Congress, and a short report will be published in the newsletter.

THE ASL EARLY CAREER EXCELLENCE AWARD (continued)

PANEL MEMBERSHIP

The Panel, comprising at least three ASL members, is chaired by the ASL President who has the power to co-opt panel members as she or he sees fit. It is expected that at least one Panel member will be a previous winner of the Award. In establishing the Committee, there should be an appropriate balance in terms of gender, discipline and backgrounds of research/management, but must ultimately ensure that the Committee has experience in the judgment of limnological excellence. No one person should sit on the Committee for more than three years. A member of the Committee may not vote on a nomination where a conflict of interest is likely to occur. If the conflict of interest results in an inoperable Committee, the President (or nominee) is empowered to co-opt from the ASL membership for the purposes of a decision on the nomination.

THE AWARD

The Award will be a certificate and a financial prize whose value will be determined by the Panel in consultation with the Treasurer. The Award will be presented at an ASL congress where the winner will be asked to present a short address with excerpts for publication in the Newsletter.

THE AUSTRALIAN SOCIETY FOR LIMNOLOGY MEDAL

Regulations

The following guidelines have been developed with a view to maintaining a consistent procedure for the Society for awarding the Australian Society for Limnology Medal.

Selection Criteria

The ASL Medal will be awarded where an outstanding contribution to Australian limnology can be demonstrated by ANY OR ALL of the following:

- **RESEARCH EXCELLENCE**: the nominee has displayed excellence in any of the fields of limnological research, as demonstrated by key research papers and publications, or significant technological advances.
- **EDUCATION AND/OR COMMUNICATION EXCELLENCE**: the nominee has played a significant role in the advancement and dissemination of limnological knowledge, where this has enhanced the knowledge of Australian aquatic systems in a variety of forums.
- **MANAGEMENT EXCELLENCE**: the nominee has played a significant role in the protection of, conservation of, or management of Australia's limnological resources, and has shown administrative excellence in dealing with limnological issues.

NB. While the terms 'excellent' and 'significant' are relative and open to interpretation, the spirit of the award should be that the person has shown leadership and influenced others to achieve. Further, that influence should be sustained over a number of years.

The Medal is not intended for administrative excellence and service to ASL. These are more appropriately recognised by other awards, such as Life Membership of the Society.

Membership and meeting of the ASL Medal Committee

1. The Committee shall consist of three members: The President and two others selected by the Executive. In establishing the Committee, each new Executive should consider an appropriate balance in terms of gender, discipline and backgrounds of research/management, but must ultimately ensure that the Committee has experience in the judgement of limnological excellence. This may include previous recipients of the Medal (or Jolly Award). No one person should sit on the Committee for more than three years.
2. The Committee should discuss the award at a meeting or by telephone or by email.
3. The Committee's Chairman will be the President (or nominee) and he/she will be responsible for organising the call for nominations, circulating nominations and arranging suitable meetings for the selection process. The Secretary of the Australian Society for Limnology will provide administrative assistance as required.

THE AUSTRALIAN SOCIETY FOR LIMNOLOGY MEDAL (CONT.)

4. The Committee will assess nominations and, where it deems that an award should be made, make recommendation(s) to the Executive, through the President, for final endorsement. A two-third's majority is sufficient for the Committee to recommend that an award be made.
5. A member of the Executive, or a member of the ASL Medal Committee, may not vote on a nomination where a conflict of interest is likely to occur. If the conflict of interest results in an inoperable Committee, the President (or nominee) is empowered to co-opt from the ASL membership for the purposes of a decision on the nomination.

Nominations

1. Any person may be nominated for the ASL Medal.
2. Only financial members of the ASL may nominate a person for the ASL Medal. The nomination must be in writing and must be seconded by a financial member of the Society.
3. Nominations must include a supporting statement addressing the relevant selection criteria and, if deemed appropriate, a current copy of the nominee's CV.
4. Assessed nominations will lapse immediately. Unassessed nominations (when the Committee has not been able to make a decision) will be forwarded to an incoming Committee.

Citation

The announcement of an award will be made at the annual congress and will appear in the Society's Newsletter accompanied by a citation describing the reasons for the award.

Award Value

The nature and value of the award will be determined by the Executive Committee of the Society. The award will normally constitute a Medal (suitably inscribed), and an economy airfare, registration and reasonable accommodation costs will be paid for the recipient to attend an Annual Congress (see below).

Conditions of the Award

Unless extenuating circumstances are operating, the Medal can only be awarded (and presented) to the recommended recipient in person at the next Annual Congress of the Australian Society for Limnology. In accepting the award the recommended recipient will be required as a condition of the award to present the "Hilary Jolly Memorial Lecture" to be scheduled during the Annual Congress. The Award address should be accompanied by a paper intended for publication in a refereed international journal, and the paper should include a footnote or byline to indicate its significance.

Prepared by a sub-committee of the Australian Society for Limnology, January - June 1998.

Congratulations

Centenary Medal awardees that were announced on 23 April 2003 include:

Peter Wray CULLEN
For service to Australian society in environmental science and technology.

Barry Thomas HART
For service to the conservation of rivers and to water quality, in particular the Gippsland Lakes.

Emeritus Professor Arthur McCOMB
For service to Australian society in environmental science.

Professor Ian POTTER
For service to Australian society in ecology and marine science.

Please advise the Editor of any other ASL members who were recipients of the Centenary Medal

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Congratulations are also extended to Dr **David Mitchell** (inaugural Director of MDFRC, Albury and currently Professorial Associate, School of Environmental & Information Sciences, Charles Sturt University) who has been awarded the 2003 International Fellow Award by the Board of Director's of the Society of Wetland Scientisits.

Citation is as follows:

"On behalf of the Board of Director's of the Society of Wetland Scientists, I am pleased to inform you that the Society has elected you as the recipient of its 2003 International Fellow Award for a life-time of contributions to wetland science and management. The Society wishes to recognize your distinguished career devoted to scientific discovery and contributions to aquatic plant biology and management. Your seminal contributions in the ecology and management of aquatic plants as well as the ecological aspects of the sustainability and management of water within the landscape have been ground breaking contributions. And of course your UNESCO publication "Aquatic Vegetation and its Use and Control" and subsequent pioneering work on aquatic plants, are known world-wide."

David will receive the International Fellow Award at the Society of Wetland Scientists 2003 meeting to be held in New Orleans, Louisiana in June.
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SCUTTLEBUTT, RUMOUR AND A BIT OF PRATTLE

CENTRE FOR CATCHMENT AND IN-STREAM RESEARCH, GRIFFITH UNIVERSITY, BRISBANE

By the time this goes to print, the Ecosystem Health Monitoring Program (EHMP) team of **Mick Smith, Marc Seifert, Andrew Cook, Carl Murray** and **Mark Kennard** will have completed the second round of sampling. They are now looking forward to many months of sorting through samples and data analysis to derive ecosystem health report cards for south-east Queensland streams. Many thanks go to the casual staff who did all the dirty work in the field.

Sadly **Marc Seifert** is leaving us to pursue a PhD investigating the impacts of cyanotoxins on riverine biota with the National Research Centre for Environmental Toxicology (UQ) and Qld NR&M. His quick wit and words of wisdom will be missed by most, especially Carl who now has twice as many bugs to identify.

The Dryland River Refugia team have completed their autumn sampling in the Border Rivers, Cooper Creek and Warrego River catchments. It was nice to see a bit of water again particularly in the two most western catchments following some late summer rains, although the vehicles didn't look happy (or the detailer). The current sampling phase of the project ends on June 30, followed by a three-month write-up period. The second phase starts on October 1 (see next issue).

We belatedly welcome **Kate Smolders** (formerly of UNE) who will be working on a number of new projects in the near future. Kate has already spent the last two months learning the metabolism ropes on the refugium project and subsequently leading a metabolism team on the EHMP.

The usual CCISR winter migration to NABS has occurred once again with **Stuart Bunn, Fiona Balcombe, Mick Smith, Wade Hadwen** and **Christie Fellows** taking in the sunny sites of Atlanta at present. We are waiting for our postcards guys.

From

Stephen (Harry) Balcombe

ASL News From The Northern Territory

Paul Lloyd took leave from Environment & Heritage (NTG) to organize the Litchfield Wetlands Workshop, Field Trip and Strategy Meeting, with funding from WWF. The Litchfield Shire in Darwin's rural hinterland includes ephemeral wetlands that develop in large surface depressions and more permanent wetlands that provide dry season discharge to monsoon vine forest patches. **Bill Philips** addressed the workshop about Ramsar opportunities. A cast of many discovered the region is blessed with some magnificent wetlands, some cared for by Landcare groups, but most occurring on private or crown land.

A wide variety of scientists have been collating information on Darwin Harbour and its tributaries and catchment ecosystems, as part of the area's first comprehensive Management Plan. This included research by **Armando Padovan** (algae) and **Peter Dostine** (invertebrate and vertebrate fauna) both of the Water Quality section NT Government, **Ian Cowie** (water plants, Herbarium) and freshwater fish (**Helen Larson**, NT Museum). The extractive industries made an interesting presentation about the extensive sand mining from the ephemeral wetlands in Darwin's hinterland and its importance for the construction industry. This was followed by the Herbarium's presentation that these ecosystems are the centre of diversity for *Utricularia* species in the world, being home to 80% of this carnivorous aquatic orchid-like genus.

Wayne Erskine, hydrologist from the Office of the Supervising Scientist and now UNSW has summarised the five Daly River projects (Erskine *et al* 2003. *Recommended environmental water requirements based on ecological, hydrological and biological principles for the Daly River, Northern Territory*).

1. Modelling Dry-season flows and predicting the impact of water extraction on a flagship species - the pig-nosed turtle (*Carettochelys insculpta*) (Arthur Georges and others).
2. Tree water use and sources of transpired water in riparian vegetation along the Daly River, Northern Territory (Tony O'Grady, Dereck Eamus and others).
3. Environmental water requirements of *Vallisneria nana* in the Daly River, Northern Territory (Naomi Rea, Peter Dostine, Sam Cook, Ian Webster and David Williams).
4. Periphyton and phytoplankton response to reduced Dry season flows in the Daly River (Simon Townsend, Armando Padovan, Peter Gell, Roger Croome and others).
5. Inventory and risk assessment of water dependent ecosystems in the Daly Basin (George Begg, Van Dam and others).

His specific recommendations are perhaps the first time rigorous data about environmental flows and catchment practices have been presented to government. Although the NT is still without a water allocation process, we are anticipating the information will be used to help prevent unsustainable water resource and agricultural development. Allocation, licensing, water use efficiency and water quality issues are managed in an *ad hoc* way at best. Irrigators are securing entitlements, land is being cleared and developments encouraged without any over-arching regulations, regional strategy, catchment plan or community consultation. In particular, indigenous people and landowners have yet to be consulted, even though they own and live in a large proportion of the Daly River catchment and utilize resources of the river and floodplains.

The Daly River development was used as the focus point for a live to air discussion on ABC's Late Night Live about the Future of the North and how not to repeat mistakes made elsewhere. **Naomi Rea** was part of the LNL panel, flying the flag for freshwater issues and in a subsequent forum on the same topic **Bob Wasson** from CRES, ANU gave some sage advice about the capacity of landscapes to withstand various uses, describing the Top End as a land of howling drought punctuated by the odd storm. The forum heralded a name change from NTU to Charles Darwin University, a partnership with ANU, and heard from speakers such as Mandawuy Yunupingu, Tim Flannery, Tony McMichael and Robin Batterham.

Movement is afoot to boost freshwater ecological research in the NT. There is a tender out to collate a broad range of ecological data pertaining to rivers in the Top End and a hydrological study of the Victoria River and its floodplain is the basis for proposed developments in that region. An EIS on the proposed expansion to the MacArthur River Mine will look at whether diversion of the river for 2 kms and damming of one tributary will be acceptable.

From

Naomi Rea
Charles Darwin Uni.

Charles Sturt University – River and Floodplain Ecology Research Group

The past year has seen major changes in the River and Floodplain Ecology group at CSU and we are now gearing up for a busy year of new projects. Lost from the group in 2002, but certainly not forgotten, are **Alistar Robertson** and **Darren Ryder**. Despite their absence from CSU, Alistar and Darren continue to collaborate with **Robyn Watts** on their 'Developing indicators of river health' ARC linkage project. **Errol Nye** has joined the team and is about to tackle the University flume as part of the projects examination of the effects of water velocity on biofilms exposed on river banks.

Robyn has also been working with other group members including **Ken Page**, **Amy Jansen**, and **David Roshier** undertaking the Murrumbidgee regional assessment of the 'Living Murray' Initiative for MDBC. This has involved some very intensive work over the past few months, and has provided the opportunity to integrate much of the past research undertaken by the group. Robyn and Amy are also currently working with **Ian Prosser** and **Scott Wilkinson** from CSIRO Land and Water on their project to identify catchment assessment techniques to help determine priorities in river restoration.

Graduation ceremonies at CSU this April saw four students from the aquatic sciences field accept their PhDs. Congratulations to **David Crook**, **Bronwyn Lowe**, **Alison Mitchell** and **Andrea Wilson**. Andrea has now been contracted to the academic team at CSU as Associate Lecturer in Aquatic Biology. Another of CSU's PhD students, **Ayesha Burdett**, won the ASL student prize at Margaret River last year for her seminar on the influence of agricultural management on wetland habitat structure and macroinvertebrates. Away from the glamour of graduation ceremonies and conferences, **Skye Wassens** has just completed several weeks of radio-tracking Southern Bell frogs in the wilds of Coleambally for her PhD research.

Other exciting news for the river ecologists at CSU has been the successful tender to Land and Water Australia for the development of a *Graduate Certificate in River Restoration and Management*. Preparations for the first intake of postgraduate students in 2004 are now under way. On top of this, a recent announcement by CSU and CSIRO has confirmed that three new professorial chairs will be established at the University later this year. New Professors in Systems Aquatic Ecology and in Water Policy will be established within the Faculty of Science and Agriculture at Wagga Wagga Campus. A third professorship in Environmental Management will be based at the Albury-Wodonga Campus. We will keep you informed as to who fills these new appointments in future instalments to the newsletter.

From

Andrea Wilson

South Australia

Torrens and Patawalonga Catchment Water Management Boards

In February a hydrologist, **Marion Santich**, and a biologist, **Peter (Pedro) Schultz**, joined the team at the Wayville office of the Catchment Water Management Boards that covers the centre of Metropolitan Adelaide, the Port River drainage area and the rural catchments to the East as far as Mount Pleasant. Pedro's role is focussed on the provision of water for the environment and monitoring.

Projects initiated include:

- A three year chemical and biomonitoring program at 34 sites to be performed quarterly.
- Detailed monitoring at eight sites downstream of the Gorge Weir, which deprives the urban River Torrens of natural summer flows, is nearing completion. Hopefully in future years an EFP will be provided here and at other sections of the presently highly modified River Torrens.
- A comparison of two sections in the lower River Torrens, one with unrestricted horse access and one without has commenced.
- Two projects are examining the present distribution of fish within the Torrens and the possible benefits of fishways to natural recruitment of native fish populations.
- Liaison with the University of Adelaide and the University of South Australia has been initiated to provide assistance for student investigations within the catchments.
- A search for springs and biodiversity hot spots will be conducted using the data from a DWLBC videographic survey of the streams of the Southern Mt Lofty Ranges and Fleurieu Peninsular.

From

Peter Schultz

AQUATIC ECOLOGY & BIOMONITORING
AUSTRALIAN WATER QUALITY CENTRE, BOLIVAR, SA

While the chironomid emergence problems mentioned in previous despatches have become quelled as the temperatures drop, the issues are still receiving the attention of **Chris Madden**, **Darren Hicks** and others. Investigative studies are seen as a much more preferable alternative to aerial spraying.

Pedro Schultz has been keeping us busy in his role of client. Darren, **Vlad Tsymbal** and Chris spent days out after fish, bug and water quality data in two sections of the urban Torrens River. Also part of the team was **Michael Hammer** (Adelaide Uni./CRCFE) and **Jason Higham** (Primary Industries & Resources).

There is lots of talk about the Murray of late. National Parks and Wildlife SA will be recruiting a biologist to survey the South Australian Murray channel and floodplain waters to assess the effect of salinity. Our team welcomes the additional effort in limnological work that the position will represent. The combined effects of drought and a managed drawdown of lock impoundments is being investigated by **Tracy Corbin** (invertebrates) as well as **Fiona Harvey**, **Caroline Fazekas** and **Mike Burch** (biofilms and water quality). **Paul McEvoy** and **Adrian Pinder** (CALM, WA) provided comment on an article dealing with the biological 'discoveries' resulting from the MDBC Sustainable Rivers Audit (SRA) pilot study. The audit showed *Nais barbata* - hitherto unknown from Australia – was widespread in the SA Murray.

Paul was pleased to see presentations on some SRA outcomes at an Adelaide meeting to discuss the Monitoring & Evaluation Framework for measurement of river condition under Commonwealth Natural Resource Management arrangements. The technical input was stimulating but the intended approach of NRM seemed downright scary. That meeting was followed on by the lastest ever River Bioassessment Workshop, with lots of presentations and discussions on where we are now in assessing health/condition of rivers after a decade of the National River Health Program.

Very pleasing news is the expansion of the EPA's state ambient river health monitoring program. The number of sites has greatly increased, and we once again have a reason to spend more time in the outback regions of the Gammon Ranges, Lake Eyre Basin and Torrens Gorge. The persistent efforts of **Peter Goonan** have been a key driver in seeing this happen. He has battled so hard, that he is celebrating/recovering with an overseas holiday.

With the end of financial year hurtling towards upstream, there is much "throwing of the selves" into proposals, budgets, meetings and data collection to see old projects off and set new ones up. All should make an interesting experience for **Darren Schultz**, who has just joined the AWQC for a workplace placement in conjunction with his TAFE course, till the end of November. Catch you in the next financial cycle.

From

Paul McEvoy

Freshwater Ecology, Arthur Rylah Institute (ARI), Dept. of Sustainability & Environment

Autumn has been a busy time at ARI with most staff frantically racing around the countryside on field trips. The bug group (**Phil Papas, Di Crowther, Shanaugh McKay, Mike Nicol, Sabine Schreiber** and intermittently **Ruth Lennie**) continued regular biomonitoring projects for a range of clients, as well as being able to carry on with some 'real research' on questions related to sustainable agricultural practises (seductively called the ESAI projects) and forestry. Most of the other ASLers at ARI (**Belinda Cant, David Crook, John Koehn, Wayne Koster, Jarod Lyon, Shanaugh McKay, Ivor Stuart** and **Charles Todd**) have also been busy in the field and the office with numerous fish-focussed projects also demanding some more and some less enjoyable trips around the countryside: the annual event of the snags-trip around Yarrawonga is still in full swing at the time of writing and involved once again just about everyone at ARI at one stage or another. This year the trip was interspersed with a workshop on electrofishing, held by **Larry Koltz** and **Jim Reynolds** (USA) and attended by people from near and far. Apparently the social side of the workshop was also a great success. Sabine is battling with getting the monthly instalment of Statschats at ARI back on track, with the first one of the year, in March, consisting of a very user-friendly presentation by **Rob Goudey**, the EPA biometrician, on the various uses of regression(s) in his work at the EPA (Macleod) with a fruitful discussion - (yes, hops must be classed as fruit, I guess). Sabine has also continued to represent ASL on a steering committee for the formation of the Australian country section of the Global Water Partnership (www.gwpforum.org) - which has already had its first name change from OzWP to the Australian Water Partnership!! A web page is under development - keep tuned for any further info or have a look at the GWP website to see what the toolbox associated with this group looks like.

In late March, **Charles Todd** attended a workshop on the analysis of multistate capture-recapture data in Montpellier, France. The workshop was run by well-known statistical/quantitative ecologists J-D Lebreton, R Pradel and E Cooch. The workshop went through the first principles of the analysis of capture-recapture data to the state of the art in this area known as multistate capture-recapture data which is the generalisation of capture-recapture data to analyse a much wider range of data and problems. The consequences for freshwater ecology lie in understanding movement, dispersal (as opposed to general movement), and categorical individual covariates (or predictors) changing over time as well as the usual Cormack-Jolly-Seber type models (known as CJS models, producing standard estimates of survival and recapture rates). The generalisation of capture-recapture data to multistate models is an important development in the understanding of the ecology of freshwater species. Besides attending this workshop Charles also had a great time eating great French food, drinking French wine and generally living it up (some people have all the luck !!!)

One of the less enjoyable field trips demanded from Jarod included the aftermath of the recent fires. On February 26 2003, a flash flood occurred in a heavily burnt area of the upper Buckland Valley, causing large amounts of ash and sediment to be deposited into the Buckland River, a tributary of the Ovens River.

This material quickly formed into a "slug", which moved downstream through approximately 100km of excellent Murray cod and trout cod habitat. As well as lowering DO levels to below 0.2 ppm at any one point in the river for 24 hours, the slug deposited huge amounts of fine sediment in its wake. Several fish species were found dead along the sides of the river, including Murray cod, river blackfish, smelt, and carp. **Jarod Lyon**, was one of the team that set out to investigate the impacts of the "slug" on native fish. Using back-pack and bank mounted electrofishers, they surveyed several sites along the river, and found a 100% reduction in native fish numbers along a large stretch of the Buckland River. The same result was found in the Ovens River between Porpunkah and Myrtleford (i.e. a site surveyed 12 months ago revealed over 200 native fish while the same site this year had no fish).

John Koehn made a presentation on the status of carp in Australia to John Nevin (Policy advisor) and Dennis L. Schornack (US section chair) for the United States and Canada International Joint Commission dealing with the cross jurisdictional issues of invasive species. These US government appointees were interested in the Australian perspective of dealing with invasive species, particularly carp as key fish species which are spreading through USA/Canadian cross border river and lake ecosystems. **Belinda Cant** has been finishing off two major projects in the last month. The first was one of six National Action Plan Foundation Funding Projects including NAP capacity building strategy development; monitoring and evaluation strategy; the information management and support project; the asset identification and target setting project; the research and development strategy; the work to develop the Catchment Analysis Tool and this project which was the Conceptual Framework for Biodiversity Tolerance to Salinity. The project was completed in partnership with **Kimberely James** of Deakin University with the help of **Tom Ryan** and **David Duncan** from the ANU. It was fortunate that this project coincided with the release by Land and Water Australia of a database containing salinity tolerances of almost 1000 Australian organisms. This database was used to develop a quantitative risk model that describes the proportion of biodiversity assets at risk of decline as salinity rises in an area. It is as far as we know the first model of its kind in Australia. This model may prove to be an effective tool triggering management action to protect biodiversity in salinising areas.

The other project that Belinda has nearly completed with **Tom Ryan** is the Management Options for Cardross Lakes in NW Victoria. This project aimed to develop options to protect one of the most diverse fish communities in Victoria that were at risk of decline due to a lack of flows to these disposal basins. This project demonstrated the classic NRM dilemma prevalent in water and irrigated horticulture industries; that is: while increased water use efficiency is seen as an essential goal to increase the sustainability of irrigated horticulture, it can also have dire consequences such as disposal basins which support some of the last remaining biodiversity in the area drying up. This problem of increased water use efficiency is compounded by the fact that water savings are channelled into further development rather than environmental flows. So while irrigators foot the bill for pipelining because of environmental concerns the water has gone to their competitors upstream rather than the environment. This project aimed to bring stakeholders together to support the allocation of an environmental flow to Cardross Lakes to support the populations of threatened native fish and the ecological function of the lakes overall. The Environmental water allocation has been made for 2002-2003 and will hopefully into the future.

From Di Crowther and Sabine Schreiber

WSL Consultants

Another field season draws to a close and the WSL crew are preparing for the winter microscope onslaught. With increasing workloads the crew has expanded in recent weeks with **Cameron Amos** and **Chris Bloink** hopping on board. Cameron has made the swim from Tassie and claims to be a good leg spin bowler, Sydney Swans supporter and from a family of 17. Apparently life is quiet in Tassie or at least that's what his parents said. Chris has jumped ship from one of Melbourne's other consultancies, comes from a family with a much lower sex drive than the Amos's and despite claiming to be a master of mini golf, may gain a bit more respect for being a Fitzroy supporter. Give us a few more weeks and we'll have both of them bugged into shape.

In the build up to winter, WSL has been busy with new work in the Torrens and Patawalonga catchments of South Australia. This work involves the collection and analysis of ambient water quality for the Catchment Water Management Boards. With the first round of sampling completed I personally eagerly await my opportunity to go on the next round of sampling; Hmmmm, wine entrée, bugs for the main.

Closer to home we have new work in the City of Maribrynong. Monitoring as part of the Neighbourhood Environment Improvement Program sees us performing biomonitoring of the Stony Creek catchment. Amphibians, fish, macroinvertebrates, water quality and sediments will be monitored, providing valuable background information to base further decision making upon.

Meanwhile other programs continue, and **Dan**, **Pat**, **Gen** and **David** are keeping busy. Pat still holds rank in the footy tipping, Dan is disgusted in the Tigers latest effort and what can I say, I'm a Hawks man. As winter arrives however, there has been talk of holidays so perhaps I will hide.

From

David Bryant

AQUATIC ECOSYSTEM HEALTH, NATURAL RESOURCES SCIENCE UNIT DEPARTMENT OF NATURAL RESOURCES AND MINES (NR&M)

At present staff at Rocklea are getting into the swing of the autumn season fieldwork program as well as number crunching and production of reports before deadlines are due. The unit moved into new accommodation at Christmas time with plenty of office and lab space available (very much in contrast to what was available previously). However, another accommodation move off site (to the CSIRO Long Pocket Laboratory at Indooroopilly) is very likely within the next 6 months.

Peter Hancock has started work with the unit on a pilot groundwater biota survey project. Peter H. comes from the University of New England where he has undertaken a PhD to which he is putting the finishing touches. **Peter H.** and **Alisha Steward** have reviewed and trialled a number of sampling methods for the project in Coochin Creek, south east Queensland and will be applying these to the Pioneer Valley in northern Queensland.

Diane Conrick, Chris Marshall, Andrea Prior, Kim Cheshire, Annette Ritchie and **Chris Thomson** and the district hydrographers are currently sampling macroinvertebrates throughout the state for the ambient monitoring program. Prior to this sampling **Diane** set up a monitoring program for Mt Isa Mines in the Mackay-Bowen area.

Michelle Winning spent time with staff from Griffith University field sampling in the Border Rivers area for the previous round of fieldwork for the CRCFE Dryland Refugium project. **Jon Marshall**, while working on the analysis of data and a review for the Condamine-Balonne Environmental flows project, has found time to help with the current fieldwork round collecting bugs for the CRCFE Dryland Refugium project in the Cooper and Warrego Catchments.

In between fieldwork stints, **Chris T.** and **Chris M.** have been studiously working away on the desktop water quality project looking at modelling water quality parameters in relation to environmental variables throughout Queensland Rivers.

Chris M. and **Peter Negus** have completed the background document for the Fitzroy Resource Operations Plan - Research Project for Ecological Monitoring and Assessment and it has been successfully reviewed by the Australian Centre for Tropical Freshwater Research, James Cook University. The data from all indicators for the first 2 rounds of sampling has been collated by **Chris M.**, **Peter N.**, **Kim** and **Michelle** and is being analysed with assistance from **Bronwyn Harch** from CMIS, CSIRO.

Everyone in the unit recently spent some quality time together at a science retreat reviewing the science and methods that are the basis of much of the work being undertaken by the unit. The retreat was held at the University of Queensland's Marine Field Station on North Stradbroke Island, which is a well set-up venue for conferences/workshops as well as having fantastic views and being a great staging point to explore most of the Island. A good time was had by all as well as allowing a number of issues to be discussed and placed on an agenda for future action by the unit.

The unit has also been working (along with several IT staff) on the development of a whiz-bang database called AQEIS (AQuatic Ecosystem Information System) over the last 12 months. The Oracle database will store data for all taxa (including individual measurements like fish lengths and weights) and all environmental data (including uploads from HYDSYS and photos of each site) across all projects and will make the units tasks a bit more efficient. A working version with limited screens allowing the unit to start using it will be ready within a couple of months.

Satish Choy has been involved in the development of future Departmental science priorities and in the review of NR&M's involvement in the three water-related CRCs. **Satish** and **Peter N.** have also been contributing to the MDBC SRA pilot project. **Satish** and **Diane** have attended the final NRHP workshop in Adelaide, where the results of the first Australia-wide Assessment of River Health (AWARH) were discussed, as well as other AusRivAS related issues. This was preceded by a workshop to review river condition indicators and methods and provide advise to the NRM Ministerial Council's Monitoring & Evaluation Working Group.

Glenn McGregor attended the NRCET Toxic Algae Research Group's science retreat also at the UQ Marine Field Station on Straddy. On day one, postgraduate students presented summaries of their progress to date. This was followed on day two by presentations by a number of the group's external collaborators including Qld. Health, NR&M, South East Queensland Water Corporation, Griffith University, etc., and some crystal ball gazing on possible future research directions. On top of the retreats **Glenn** and **Jaye Lobegeiger** have been plugging away counting samples of dots and dashes from water storages around the state.

We would like to congratulate **Michelle** and **Chris Marshall** on the addition to their family. **Molly Rose Marshall** born on 1/2/03.

Cheers

Pete Negus

University of New England, Ecosystem Management

Dorothy Bell, **Peter Rose** and **Andrew Boulton** spent some pleasant days last month sampling water quality, macroinvertebrates and water plants at 25 sites in the Nambucca and Bellinger Rivers in areas of different land-use. After the recent rains, the post-drought recovery has been stunning and even some of the more degraded sites are looking pretty flash. Dorothy is getting more interested in in-stream seed banks (composition of seedling emerging from different riverine habitats such as gravel bars and backwaters, modes of dispersal) and their relationship to the weed invasion of some of the North Coast rivers. She heads off in late May to a conference in Naples to present her *Eleocharis* PhD work on the New England Tableland lagoons at an ephemeral wetlands symposium.

The Hons work by **Simon ('Rex') Carter** that was to tackle the effects on the fish assemblages in *Vallisneria* and *Myriophyllum* beds resulting from intrusion of saline estuarine water up the Hastings River following the low drought flows has been modified (so often the case with event-based research projects!) to looking at the effects of flushes of freshwater down the river. It seems as soon as you plan some projects on drought effects, you need a flood-based contingency plan as well. Rex has constructed large numbers of trays of artificial substrates to simulate plants, and is now waiting for the water to slow down enough so he can put them in. The Hastings Council has provided further funds for **Kelly Howitt** (Hons) to monitor recovery from drought in the Hastings estuary-river transition zone (the ERTZ) now that the saline intrusion has been swept downstream and this work will continue to the end of the year.

The newly-formed research group North Coast Aquatic Linkages (NCAL, pronounced en-cal) at UNE was awarded a Vice-Chancellor's postdoctoral fellowship recently to provide 3 years of salary for a spatial modeler with wetland interests - anyone interested, please contact Andrew Boulton. The postdoc will tackle the thorny issue of coastal floodgate management along the North Coast of NSW. Freshwater swamps have now replaced estuarine wetlands behind floodgates on many North Coast floodplains. Threatened waterbirds, such as the comb-crested jacana, now inhabit these freshwater wetlands yet NSW Fisheries seeks to restore the estuarine regime to over 50 wetlands in the Clarence, Macleay and Richmond Valleys. Agencies are concerned at the lack of scientific data on effects of proposed saline intrusion on freshwater vegetation and threatened waterbirds so they have invited NCAL to collaborate in an interdisciplinary research project to address this knowledge gap. We'll keep you posted as the project develops.

From

Andrew Boulton

OVERSEAS NEWS

The Houston USA branch of ASL (namely me) is moving to London, U.K. as of June 10. After almost 7 years in Houston, my family and I are relocating to London, and I will be working at ExxonMobil International's offices (rather than become an illegal alien in the US, which has a few downsides these days).

Contact details (and the "central booking office contact for visitors to London") will be advised at a later date.

Regards

Russell D. Tait
Email: russell.d.tait@exxonmobil.com

The Murray-Darling Freshwater Research Centre

It's Official - We're on the Move!!!

The Chairman of the Board of Management of the MDFRC, Dr. John Langford, announced in early April that the Albury-Wodonga laboratory of the MDFRC would accept an offer from La Trobe University to move to their Wodonga campus. "The move represents a significant step toward securing the future of the MDFRC and ensuring that the region will continue to have access to high quality research on water issues," Dr. Langford said.

The decision concludes an extended review of the CSU and La Trobe options that included an independent review by Dr. Wendy Craik in December 2002 and extensive consultation between the MDFRC Board, the Universities and stakeholders.

The MDFRC Board of Management believes the enhanced relationship with La Trobe University will allow the MDFRC to build capacity to deliver relevant information to managers and communities, which is needed to manage our water resources sustainably. The MDFRC will continue to collaborate with Charles Sturt University (CSU) and other Universities and organizations to the benefit of the entire Murray-Darling Basin.

The MDFRC has been undertaking research in Albury for 25 years, firstly in collaboration with the Albury-Wodonga Development Corporation and, since 1993, renting a building on Charles Sturt University's Thurgoona campus.

MDFRC and La Trobe University already have a strong relationship through both collaborative research projects and the development of a joint research facility in Mildura which should be completed late in 2003. The development of this relationship will help ensure that the MDFRC can develop its research portfolio along the entire length of the southern Basin. It is also anticipated that La Trobe's strategic alliance with Griffith University will help build a stronger support network for the MDFRC's Northern Basin Laboratory in Goondiwindi. La Trobe recognise the benefits of developing regional capacity to undertake multi-disciplinary research into issues of both regional and national significance and have offered the MDFRC a very attractive package that will enhance the MDFRC's capacity to undertake research.

The move will help ensure the future of the Centre by providing greater financial security. The La Trobe offer will allow an extra $2 million worth of freshwater research over the next 10 years, which will translate into an increased capacity to undertake research. The move will not affect the Centre's research or its commitment to service the knowledge requirements of the region. The MDFRC looks forward to building stronger relationships with communities and water manager's through-out the Murray-Darling Basin.

From

Rhonda Sinclair

Institute of Water and Environmental Resource Management and Centre for Ecotoxicology, UTS

Plenty has been happening at UTS in freshwater ecology and ecotoxicology. Not the least of which has been the formation of the research Institute for Water and Environmental Resource Management (IWERM). It is a cross faculty venture supporting research in diverse fields such as freshwater and marine ecology, ecotoxicology, groundwater, plant water use, water treatment and re-use.

This month we farewell the Ecotoxicology Section of the NSW EPA. They have been residing in the Gore Hill campus of UTS for almost 20 years and this month move into new purpose-built EPA labs at Lidcombe. We wish them all the best. Although this brings to an end a cosy cohabitation, it is by no means the end of what is a fantastic collaborative arrangement (it just means we all have some new labs to play in !)

On the research front, there is a swag of honours and PhD students who are blazing paths to research success. **Matthew Battaglia** is using AUSRIVAS to detect impacts of derelict mines under the supervision of **Grant Hose** (UTS) and **Eren Turak** (NSW EPA). **Tim Walter** is investigating the colonisation of newly inundated riffle habitat in the Kangaroo River (supervised by **Grant Hose** and **Andrew Brooks**, NSW DSNR). **Richard Lim** has returned from a sabbatical world tour and is continuing his work on the impacts of endocrine disrupting chemicals (EDCs) to mosquito fish. Richard will soon be heading off again for a stint in New Zealand to collaborate on EDC projects with colleagues at Landcare Research. Richard & **Michael Warne** (NSW EPA) have a number of EDC related projects running. **Chris Rawson** is working with EDCs & mosquito fish and **Natasha Sheedy** is testing EDC effects to *Chironomus tepperi*. **Anne Colville** is awaiting her PhD assessors' reports and is starting to look at recombinant yeast test for EDCs. **Elizabeth Brennan** is starting a PhD which continues her Honours work on EDCs at Sydney Olympic Park. **Scott Wilson** (ACU) will be looking at effects of EDCs on amphibians, and **David Booth** (UTS) will be exposing estuarine toadfish as part of a large ARC funded project.

Surattana Settacharnwit has submitted her PhD thesis in which she studied the water quality in Nong Han, a shallow freshwater lake in NE Thailand. **Rod Buckney** is proud that he can now read Thai roadsigns. **Jodie Dabovic** is continuing her work on phytoplankton in the Hunter River. **Yin Latt Phyu** is soon to finish the lab work for her PhD on the ecotoxicology of herbicides to aquatic biota. **Hermanthe Dassanayake** is working through lab tests to assess the affect of salinity on pesticide toxicity. **Rachael Smith** is in the second year of her PhD, investigating the use of an algal fluorescence bioassay for a fast and sensitive method for monitoring stormwater toxicity. **Dustin Hobbs** is working away at a desktop study comparing the sensitivity of local and overseas organisms to metals (with **Michael Warne** and **Scott Markich**, ANSTO).

From

Grant Hose

UNIVERSITY OF TASMANIA – THE FRESHWATER ECOLOGY LAB BIT

It's been quite a while since we caught up with the rest of the world, so this little gossip section will seem artificially coloured and flavoured. We aren't really as busy as this makes it seem...

Wil Elvey has finished up and had his PhD accepted. He has started an apprenticeship at one of Hobart's most classy dining venues (yes we do have some). When Jamie Oliver starts serving deep fried stoneflies, you'll know where he nicked his recipes. **Dan Warfe** has also finished up and recently had her PhD accepted. She was looking at the implications of different macrophyte shapes on predator-prey interactions. Dan barely wasted a breath before launching into work on the conservation of freshwater ecosystem values project with DPIWE. While Wil and Dan are a great loss to the lab, newcomers **Jo Clapcott** and **John Gooderham**, will make great replacements.

Derrick Turnbull is busy writing up his PhD thesis on eustheniid stonefly hunting behaviour. The hours he spends in front of the computer are making him turn a pale green colour, reminiscent of his study animals. **Rick Stuart-Smith** has just finished a gruelling set of fieldwork, while working on his PhD. The Golden Galaaxids of Lakes Sorell and Crescent keep odd hours, so Rick is slowly easing back into non-crepuscular living. Now in the lab, hopefully the inside of those little fishes will spread some daylight on Rick's interest in their diel feeding habits. **Jo Clapcott** and **John Gooderham** have also just finished a long bout of fieldwork for their respective PhD pursuits. There are now a large percentage of Tasmania's headwater streams stored in various freezers and cupboards around the department. They're hoping after a month or two, said samples will reveal some insights on headwater stream processes and structural variability - stay tuned.

We currently have two honorary 'freshies' in the lab. **Louise Cromer** (PhD) and **Camille White** (Honours) are more interested in Antarctic zooplankton than the average lab goer, but anyone who subjects themselves to several hours a day in front of a microscope seems right at home. **Dave Spiers** (Honours) has recently joined the lab and is keen to discover some bench space. When he does, he ensures us he'll let us in on some cataract snail titbits.

Last and possibly most gossip worthy, **Leon Barmuta** and **Menna Jones** are now the proud parents of young Mungo Oberon Barmuta Jones. We are happy to report he has two legs instead of six and a preference for milk over carrion.

From

John Gooderham and **Joanne Clapcott**

POSTCARD FROM TIM DOEG

The Great GST Heist

I was talking to some-one the other day, trying once again to explain the bit about tax deductions from a previous newsletter. They still didn't seem to get it ..."but hang on, they give you money back to come to this conference ....", so I give up on that one. Even if you don't think that tax deductions for consultants are the goldmine that you once thought they are, it's time to reveal one of the great benefits that we do get.

Remember the GST? It's now well and truly bedded down in our psyche - we can even repeat the slogan - "A Fairer Tax System" - without the cynicism that usually goes with political mantras. Whenever you hear a politician say "these reforms will result in a fairer education system" or "this package will produce a fairer health system" or even "this announcement will be good for the environment", something sort of goes PING! In the back of the brain and you just know that things are either on the way downhill, or will cost you more.

Not so with the GST, eh? After all, the GST is really a fairer system - every-one has to pay the GST, right?

Well, not exactly. There seems to have been a small imperfection in the GST system that seems to have escaped the attention of the general PAYE tax-paying public. And that is:

My consulting business pays no, repeat - NO - GST at all. Not a single cent. Every expense that I have related to my business is GST free. It's all TAX-FREE!

Here's how it works:

1. I am registered as a GST entity, which means I have an Australian Business Number. When I bill some-one for my time, I have to add GST to the total bill.

2. When I buy a ream of paper, or a pen, or a stamp, or pay my phone bill, there is a GST component of that bill (10% on top of the retail price). I pay that just like every-one else who buys any of them for personal use.

3. Every three months, I fill out a Business Activity Statement that states how much GST I have collected from billing people for my time. I owe that GST money to the government (that's OK, it's not my money after all).

4. But I also have to tell the government how much GST that I have paid on items (like the paper, pen, stamp and phone bill) that I use for my business (and that bit is my money!).

5. The government subtracts the amount of GST I have paid from the GST (not my money) that I have collected for them. The result is the amount of money that I actually have to send the government.

So effectively, the government gives me back every single cent of the GST that I have paid on things for my business. I don't get a cheque or anything, I just don't send them all the GST that I have collected.

This is a clear benefit over the old tax system (the "unfair" one). There used to be sales-tax on most things. Only government departments and charities could apply to be registered as sales tax exempt (so would pay no sales tax). Every-one else had to pay the sales tax (including business). Of course, business could claim the total cost (including sales tax) as a deduction, and get a tax refund at the end of the year (but this would only be a proportion of the sales tax actually spent). Under the old system, every-one, including businesses, actually did pay some sales tax to the government. Now, all the GST is returned. Every-thing that business buys is effectively GST free.

It's all there in the GST document that was sent to every household prior to its introduction. It's just that the wording doesn't seem all that clear (something about "input" and "credit" and "receivables" and stuff).

When I explained this to my friend, he (an old leftie who actually thought the GST wasn't all that bad "....after all, every-one pays it, don't they ..."), suddenly the benefits of tax deductions to consultants didn't seem quite as important (he was last seen heading for the hills to join a counter revolutionary group).

The GST is a fairer tax system, but only in an Orwellian sense. Every-one is equal - it's just that some entities (business) are more equal than other entities (you and me when we are consuming). Remember that next time you pay your phone bill, or are buying a chicken (provided it is pre-cooked and has a core temperature higher than 25 degrees) or chocolate, or whisky, or have your car serviced, or .....

And don't blame me, I didn't vote for them! [geez, I hope I got this right, otherwise I might be in big trouble].

The one and only, Tim Doeg

A BIT OF FUN

ONMIL

Onmil 1

Dear Onmil

My friends are laughing at me for being green. What should I do?

Signed

U. Green

.....

Dear U

What are you, some sort of alga? If so, you need to find your taxon, your own species won't laugh at you.....algae don't have anything to laugh with. They might try and release genetic material in your vicinity, though.

But perhaps you aren't an alga? (It's the use of a computer that gave it away - you have to be at least pond slime, sorry, biofilm to do that). Being green does limit it a bit.....you could be a macrophyte. Get a good aquatic flora book and leaf through it. It'll make a nice mulch.

But don't worry exactly what you are, autotrophs are all the same, deep down. Flaunt your greeness! Think of the money you'll save on food purchases! And it could be worse.....your friends could be eating you, not just laughing at you.

Sincerely

Onmil

~~~~~~

Onmil 2

Dear Onmil

I have scored a job sorting aquatic macroinvertebrates but I can't tell my chironomids from my culicids. What should I do?

Signed

D. Sorter

.....(continued over page)
~~~~~~

Dear D.

Learn quickly!

Macroinvertebrate taxonomy is simple, once you get the hang of the bits.....the head is connected to the thorax, and the thorax is connected to the abdomen. The thorax might be in several sections. So might theabdomen. Or the animal can be one whole bit. Or.....forget it. Just remember, anything hanging off the main bit is an appendage. Appendages arevery important. An appendage adage: When in doubt, look at the number, size and shape of the appendages. Draw them, photograph them, discuss them. It mightn't help you to identify the little blighters, but at least you'll look as if you are doing something. Careers have been built on this.

The specimen doesn't have obvious bits? If it's long and squishy, it's a worm. If it's short and would be squishy if it didn't have a shell or two, it's a mollusc. If you squish too hard, it's gunk in the sample, and you can complain bitterly about the quality control and sampling technique of the people who collected it.....except if it was your boss. Or your bosses'partner/friend/companion/dog/student (on second thoughts, accuse the student and see what it's worth).

It's probably a coleopteran (at one of its stages), because most invertebrates are. Except the ones that aren't. Anyway, don't worry, because no-one is likely to check up on your identification, it was too time-consuming the first time! And don't ask me to say the names, I'm still getting the knots out of my tongue from last time.

Back to the essential question - chironomid larvae, according to a recent key*, have "most body segments without spines or processes". The adults live fast and die young. And don't bite. Unlike culicids, whose defining characteristic, according to the same key, is "larvae not as above". So if it looks different to the specimen above it, it's a culicid. Now you know.

Sincerely

Onmil

* no insult intended to the writers of the key - it is an excellent reference for the taxonomically-challenged, like yours sincerely. And somany lovely pictures of macroinvertebrates with appendages!

Stayed tuned for future helpful advice from Onmil.

The Editor encourages some real enquiries? Any tricky limnological etiquette questions will be answered (or at least an attempt made at answering them)!

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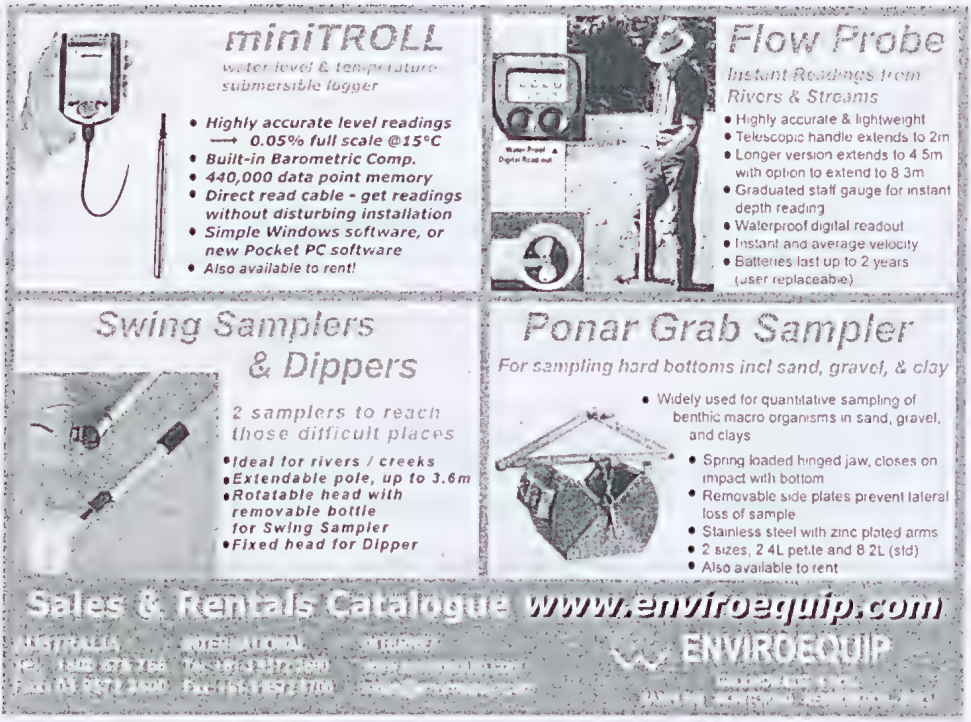
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INFORMATION FROM AND FOR MEMBERS

Victorian Crater Lakes vs Corangamite Council

The long-running struggle to get permanent protection for Lakes Gnotuk and Bullen Merri in western Victoria is unfortunately by no means over.

It has been more than three years since the controversial permits were granted to build houses inside the crater rim of Lake Gnotuk and since then four more permits have been granted. And it has been two years since since the RPD group conducted its planning review Thanks largely to the many powerful submissions from ASL members and others in the scientific community, that review came out strongly against further development inside the lakes.

It was not till February this year that Council voted to proceed with a Planning Scheme amendment and the document has still not been prepared! Even when it is, there will be many more months before the amendment becomes law. This (deliberate?) dawdling means that more permits can be granted and extended. And as each application requires written objections the community is under continued stress.

The Crater Lakes Coalition now wants to focus on raising public awareness of the significance of the lakes and the fragility of their ecosystems. We hope that ASL members might be willing to participate in any workshop or seminar we can organise.

In the meantime, we ask that whenever you are in the area for field trips or study that you let us know so we can welcome you and arrange coverage in the local press. Please contact Fiona Morris at gnotuk@bigpond.com if you are planning a visit or even if you come across some relevant research.

Fiona Morris, Crater Lakes Coalition

Investigating Freshwater

Mike Copland and Jackie Griggs (both formerly from MDFRC, Albury) have put together this years resource booklet for the Australian Science Teachers Association (ASTA) to support National Science Week 2003 (August 16 - 24), this year's topic is Investigating Freshwater, to support International Year of Freshwater.

This 34 page book called "Investigating Freshwater" contains information about freshwater issues in Australia, questions to stimulate discussion, activities which explore freshwater topics and sources of further information. The resource book explores the composition of freshwater, sources, distribution, and use of freshwater, and present and future issues around sustainable management of water use.

Its target audience is teachers and students from early childhood to senior secondary, but could also be useful to community groups and others.

The book was sponsored by the Australian Water Association. All members of ASTA obtain a copy for free. Copies are available to others for $12.75 plus postage and handling by contacting ASTA (asta@asta.edu.au).

Jackie Griggs
jacqueline.griggs@hydro.com.au

New Freshwater Mollusc Publications

Available from 25th June 2003 - monograph on the major radiation of SE Australian (including Tasmania) hydrobiid snails. 74 species are described, 57 of them new. Copies can be obtained via the Australian Museum shop at http://amonline.net.au/shop/ for $50.

Clark, S.A., Miller, A.C. & Ponder, W.F. (2003). A revision of the snail genus *Austropyrgus* (Gastropoda: Hydrobiidae): a morphostatic radiation of freshwater gastropods in southeastern Australia. *Records of the Australian Museum, Supplement 28:* 1-109.

A monograph on Australian Bithyniidae (genus *Gabbia*) will also be published within the next couple of months in *Zootaxa* - by W. F. Ponder - with 21 species recognised, 17 of them new. Once it is published PDF copies will be available through the *Zootaxa* website (http://www.mapress.com/zootaxa/)

Winston Ponder [wponder@bigpond.net.au]

4th International Symposium on Extant and Fossil Charophytes

Robertson, New South Wales, Australia
25-27 September 2004
(21-30 September including pre and post symposium field trips)

The Symposium is open to all topics dealing with Charophytes (Systematics, phylogeny, palaeolimnology, wetlands restoration, conservation and management of water bodies molecular biology, ecology, palaeontology, geochemistry)

For further information contact : Dr Adriana García
School of Geosciences, University of Wollongong, Wollongong NSW 2522, Australia
E-mail: adriana@uow.edu.au
Symposium website www.uow.edu.au/science/geosciences/conferences/irgc04

'Irrigation in a Total Catchment Context'

2nd Asian Regional Conference scheduled for 14 to 17 March 2004 - Moama, NSW. For further information please contact services@profconferences.com or phone: 03-9530 6777.

Abstract

Patricio De los Rios is finishing his doctoral thesis on the ecology of zooplankton in Chilean lakes at the Austral University of Chile. He has sent on an Abstract on the calanoid copepod *Boeckella poopoensis* in saline lakes of Northern Chile, for members information.

Full copy of the paper can be obtained by contacting the editor (Rhonda.Sinclair@csiro.au)

SALINITY EFFECTS ON *Boeckella poopoensis* (Marsh 1906) (COPEPODA, CALANOIDA) ABUNDANCES IN SHALLOW PONDS IN ATACAMA DESERT, NORTHERN CHILE

Patricio De los Rios
Universidad Austral de Chile, Instituto de Acuicultura, Casilla 1327, Puerto Montt, Chile

The calanoid copepod *Boeckella poopoensis* (Marsh 1906) inhabits in saline shallow ponds localized in Andes mountain in Argentina, Bolivia, Chile and Peru, and Southern Argentina. This specie is very halophilic, and tolerate an salinity levels between 1 to 90 g/l, these habitats have a poor crustaceans species richness. This paper described the relative abundance of this specie in mountain shallow ponds localized in Northern Chile between 23 to 27° south latitude. It was observed an notorious direct association between salinity and *B. poopoensis* relative abundance (r^2 = 0,4139), and about 45 g/l of salinity level this specie was totally dominant in zooplankton assemblage, this specie was reported in salinity level lower than 90 g/l, situation that coincides with the literature descriptions. The crustacean species richness in the studied sites had an notorious inverse trend with salinity level (r^2 = 0,7329), this trend was strong (r^2 = 0,7681) when data colleted in Bolivian Altiplano were aggregated. In this study were discussed ecological and biogeographical topics related with these results.

Keywords: *B. poopoensis*, Calanoids, salinity, zooplankton assemblage, shallow ponds.

3rd Victorian Flood Management Conference

To be held at Horsham, Victoria on 8 - 10October 2003.

The Victoria Flood Management Conference is a bi-annual event providing valuable networking, learning and information-sharing opportunities for people involved in floodplain management and flood prevention, response and recovery. The conference is aimed at Australian and International delegates from the private and public sectors.

Building on the past two conferences and the growing recognition of the ecological significance of floodplains and the interdependence of the health of our rivers and floodplains, the theme for the 2003 Conference is ***Healthy Floodplains Wealthy Future.***

For more information, visit the conference website: www.vicfloodconference.com.au

Elyse Riethmuller, Conference Organiser

FASTS

SCIENCE NEWS 2 March 2003

FROM THE PRESIDENT

Missile defence systems, continued poor sharemarket performance and not a word about science and technology in the run-up to the NSW elections- I felt it had been a bad week for science this month, which was not helped by a leaked report on what is likely to happen from the review of higher education. If the press report is to be relied on, there will be some extra funding for universities, but it will be heavily back-end loaded and of benefit at the research and regional ends of the spectrum. It is hoped that the Government recognises the infrastructure costs in mounting world-quality science, technology and mathematics programs in our universities.

It is moot whether the Government's proposal to "map" Australia's science and innovation will achieve much beyond *Knowledge Nation's* cadastre. If it leads to new initiatives to fix existing weaknesses in the system, particularly those associated with private sector involvement, it will be a useful exercise.

I was heartened at a dinner party in the UK several months ago when a guest, when asked what he did, introduced himself as a scientist. I have not yet heard such a declaration in social circles in Australia and it points to the seriousness with which Britain is taking the role of scientists of all kinds in national development. Notably, BERD and Government support for science in the UK continue to rise. Although there have been promising indications in Australia in recent years, we still have a long way to go.

On March 6, FASTS is hosting a dinner for the heads of groups in Australia with an interest in science and technology policy, including key people from the science Academies, the AVCC, ARC, CSIRO and IE Aust. The purpose is to allow an informal discussion on the direction of the national debate, and where our issues fit. For 2003, FASTS is having a close look at where it should place its principal efforts and how it should be governed. We are paying particular attention to communicating with members and this Newsletter is a first part of moves to improve information flow. I wish you all great success in what undoubtedly will be a challenging year.

Chris Fell

MACFARLANE ON POSTDOCS IN INDUSTRY

Chris Fell and Toss Gascoigne met with Minister Ian Macfarlane to discuss the FASTS' proposal to establish 100 postdoc positions in industry. Australian industry has been very slow to invest in R&D, and we thought that an incentive program similar to that offered by the government of Singapore might demonstrate the value of research to industry. Our proposal is for the Government to support the employment in private industry of new PhD graduates.

It would meet some of the costs of employing these graduates over the first two years of their employment. After the two years, the industry partner and the graduates would be released from their obligations, but the company would be free to offer continuing employment to the graduates. FASTS discussed the idea with people from industry and that helped tighten up aspects of the proposal, before we submitted it.

The meeting with Industry Minister Ian Macfarlane was encouraging. The Minister showed healthy scepticism about the benefits of our proposal and pressed us on a number of points. But he could see the benefits of breaking down the cultural barriers between research and industry, and encouraging industry to make use of research to improve existing products and create new ones. We believe it will also create a cadre of people who understand both research and corporate culture well enough to be able to identify and lobby for R&D opportunities in which Australia is competitive against corporate R&D headquarters overseas.

At the end of the meeting he said: "All right - you've convinced me. But don't expect anything in the next Budget." The final outcome is yet to be seen. It may result in changes to existing support programs or the creation of a new program. But an important component in the arguments we put to the Minister was the fact that we had sought the views of people in industry.

INVITATION TO ATTEND FASTS BOARD MEETINGS

The Presidents of all our Member Societies will be invited to attend an open session at our 2003 Board meetings to be held in Melbourne, Sydney and Canberra. The Melbourne meeting is at University House at the University of Melbourne on Monday March 24. The open session begins at 4 pm and culminates with drinks at 5.30pm. This will be an opportunity for Presidents to meet the Board and Executive, and to contribute to a general discussion on issues of importance.

It is part of a general push to bring FASTS closer to our Members. The following two Board meetings will be held in Sydney (August 4-5) and at the annual Council in Canberra (October 16). On each occasion we will invite all Presidents or their nominee to attend a special session.

VISIT OF U.S. CONGRESSIONAL FELLOWS

For the last 30 years, the Congressional Science and Technology Fellows Program has been an impressive part of the daily life and decision- making in the US. Over 1300 scientists and technologists have participated in the Program, bringing their scientific skills to Washington and working within the Congressional system to keep Members and Senators abreast of rapidly- moving events in science.

The scientists are attached directly to the staff of Senators or members of the House of Representatives, or to Committees attached to either House. They are recruited and paid for by the scientific societies, and their term of appointment is for a year. There are currently about 35 scientists participating in the Program. This has introduced a source of expertise into Congressional deliberations; assisted members of Congress become more familiar with policy issues involving science; and helped the scientific and technological community come to grips with the realities of policy-making.

FASTS is interested in exploring the adoption of the Program in Australia. We are arranging a visit by five former Fellows to explain the Program to leading figures in the Australian Parliament. The visits will take place on Monday, Tuesday and Wednesday in the week beginning Monday June 16. The visit will be an opportunity for members and officers of the Australian Parliament to consider how the Program might be adapted to suit Australian circumstances.

The visiting Americans will take advantage of their time in Australia to visit a number of major research institutes, to learn more about the range and quality of top-level Australian science.

Switzerland has adapted the program to its Parliament. Dr Margrit Leuthold is the Secretary of the Swiss Academy of Medical Science, and runs the Swiss program. She is visiting Australia in May, and FASTS is arranging for her to discuss the success of the Swiss program with leading figures in Government. She will give a public talk in Canberra on Monday May 12. More information will be posted on the FASTS' web site: www.fasts.org

FASTS ELECTS NEW EXECUTIVE

Professor Snow Barlow has been elected President-elect of FASTS. He will join the Executive immediately, and begin his two-year term as President in November 2003. The current President, Professor Chris Fell welcomed the election of Professor Barlow. He said the position of President of FASTS was a pivotal one.

"Water, new energy sources, the environment, the development of new industries - these are just some of the matters which occupy the minds of Australia's decision-makers, and all of them revolve around science. Science is so important to Government, and FASTS is increasingly being called upon to provide the views of working scientists."

Professor Fell said that Professor Barlow's experience would stand him in good stead. "Snow Barlow is a working scientist in areas such as water use and climate change. Members of Parliament nominated both these issues as being in the top five in our recent 'Science meets Parliament' Day event." Professor Barlow is a member of a CRC, and has been on Boards or Committees for the R&D Corporations, the Academy of Science and the ARC. He has represented Australia at international treaty discussions on matters such as Greenhouse and Climate Change.

Associate Professor John O'Connor of the University of Newcastle is the other new member of the FASTS Executive. He was elected to the position of Secretary. Professor Fell thanked retiring Executive members Jan Thomas and Peter French.

The full FASTS Executive is:
President: Professor Chris Fell
President-elect: Professor Snow Barlow
Vice-Presidents: Dr David Denham and Professor Rob Norris
Secretary: A/Prof John O'Connor
Treasurer: Dr John Rice
Chair Policy: Dr Ken Baldwin
Executive Director: Mr Toss Gascoigne

NO BOFFINS IN MODERN SCIENCE

On Monday January 20, FASTS launched a campaign to end the use of the word 'boffin' in media headlines. Professor Chris Fell said that 'boffin' was a jaded word which bordered on the offensive for many scientists.

"It conjures up images of weird old men in flapping lab coats, pouring strange chemicals into test-tubes, like Doc Brown in the 'Back to the Future' movies. The term reinforces a negative perception which stops people seeing the value of science. It inhibits young students looking at science as a possible career."

"The true picture is vastly different. Science is lively, useful and generates wealth. It's about finding solutions to problems and creating new industries and new jobs. Every new industry created in Australia this century will have a basis in science and technology. Every environmental problem we have in Australia - water, global warming, rampant weeds, salinity - has a solution that begins with science."

WORKSHOPS FOR SOCIETIES PROVE BENEFICIAL

Ninety-two representatives of our Member Societies (presidents, executive, board members, or executive officers) have attended workshops conducted by FASTS in Melbourne, Sydney, Canberra, Adelaide and Perth.

The two Workshops covered "*Planning and Communication for Membership Benefit*", and "*Managing Associations for Membership Benefit*". There are two more workshops to be held. Toss Gascoigne at the FASTS' office is interested in hearing suggestions about the best times and places to hold them, perhaps in conjunction with a conference or meeting.

The responses from attendees have been positive. Here are comments from participants in the two most recent workshops in Brisbane and Canberra:

· *The opportunity to network with other societies; sharing of practical, innovative ideas that can be used to inspire members of the society. Thank you - I feel inspired (Diana Oakes, Australian Birth Defects Society)*

· *I wish I had done this earlier. I think all our council members should do a similar course (Robyn Cowley, Australian Rangelands Society)*

· *The media content - it was all a new experience and I might not find time to seek it out otherwise; it was also good meeting all these great people. Very illuminating and directional. (Anna Robinson, WISENET)*

· *This course presents a wealth of resources for societies on how to improve their aims, etc (Frederick Bouckaert, Australian Society for Limnology)*

· *Learned societies cannot afford to stand still - this workshop provides excellent ideas on ways to develop value for members (Tom Cribb, Australian Society of Parasitology)*

· *Content very useful, especially related to policy development and organisation; also liked the number of practical tips given (Lois Salamonsen, Society for Reproductive Biology)*

SCIENCE MEETS PARLIAMENT FOR 2003

This event has been described by a political insider as "the most effective interaction between scientists and Parliament I've ever seen." This year it will be held in Canberra on Tuesday-Wednesday October 14-15.

The format will be freshened up in line with comments from participants, but we'll keep all the strong features - briefing by senior politicians, the cocktail reception at Parliament House, one-on-one meetings with MPs, and the dinner where scientists can talk shop with MPs and industry.

Registration will open later in the year, and the latest information is posted on our website: www.fasts.org

UTS TO RESEARCH ATTITUDES TO SCIENCE

UTS Associate Professor Peter Aubusson is conducting a three year study focussed on the reasons for a lack of interest in science during years 7 to 10 in Sydney schools. The low level of interest is reflected in the low enrolments in Higher School Certificate science subjects. A consequence is a shortage of science teachers, already described as chronic.

FASTS' TOP TEN ISSUES FOR 2003

FASTS' Ten Issues concentrate on industry, education and developing a national strategy. For instance, we want more scientists working in industry - the 100 Postdocs proposal - to open the way to producing new products and improving existing ones. We're proposing a new program to bring more science into Parliament, with scientists seconded to work for a year with Parliamentarians on crucial issues.

And we want to change the HECS scheme. Young science and mathematics graduates who go teaching currently take home less pay than their colleagues teaching history, art or woodwork. At a time when the number of students doing science and maths subjects is falling rapidly, we need to encourage bright young graduates into teaching.

Professor Fell said that Australia was inching towards setting a long-term vision for our national future, with the identification of the national research priorities. "As a country we need to know where we are going, and how science and technology can help us get there. Priority research areas are important, so is proper funding."

The Ten Top Issues for 2003

1. AUSTRALIA NEEDS A MAP AND A COMPASS. We have a 10-year plan for defence - why not for science and technology? We should plan for the future, set national goals, and ensure that science serves the national interest.
2. BOOST FUNDING FOR UNIVERSITY SCIENCE. Science and technology are expensive courses to run but vital to Australia's future. The special funding requirements of these courses need to be recognised by Government and universities.
3. ENHANCE INDUSTRY INNOVATION. Meet half the cost of employing new PhD graduates in industry for 2 years, to encourage industry make the best use of science in developing new products and improving existing ones.
4. BRING ON "BACKING AUSTRALIA'S ABILITY". The Innovation Statement was the first step to re-invest in Australian science, but we continue to lag in international terms. It's time to take the second step and increase our national investment to OECD average by 2012.
5. VIVE LA DIFFERENCE! Encourage universities to pursue individual excellence in teaching and research, rather than being clones of each other. Foster institutional cooperation on expensive equipment and joint projects.
6. ENCOURAGE INDUSTRY TO BE INVENTIVE. Give tax breaks on a sliding scale to companies prepared to invest more in research, because enterprising and inventive companies grow and provide more jobs.

7. SCIENTISTS ADVISING PARLIAMENT. Place scientists in Parliament for one-year secondments, to advise MPs on science-based issues such as water, salinity, energy sources of the future, climate change, health and resources.
8. EQUAL HECS FOR SCIENCE AND MATHEMATICS TEACHERS Science and maths teachers are in short supply in Australia, but they still are forced to pay higher HECS fees than teachers in other subjects; and so they take home less pay.
9. ATTRACT VENTURE CAPITAL INTO NEW INDUSTRIES. Venture capital is in short supply. Make it more attractive to invest in new ideas and new industries by introducing new measure such as diminishing annual rates for capital gains tax.
10. IMPLEMENTING NATIONAL RESEARCH PRIORITIES. Australia has adopted research priorities. Now we need to implement them, and find effective ways to measure the progress our science makes to meeting the goals.

NATIONAL FRAMEWORK FOR EMERGING BIOLOGICAL THERAPIES

The Therapeutic Goods Administration is developing a framework for human tissues and emerging biological therapies. If you are interested in commenting on the discussion paper or attending a workshop on the draft, please contact Andrea Matthews (02 6232 7240, or andrea@mpconsulting.com.au)

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At Last! A Science Minister For NSW, 10 March 2003

Australia's peak body for scientists and technologists today (Monday) welcomed the announcement by Premier Bob Carr that NSW would create a new Ministerial position for Science and Medical Research if his government is re-elected. Professor Chris Fell, President of the Federation of Australian Scientific and Technological Societies (FASTS) said that the commitment reflected the economic realities of the day. "There are not going to be many worthwhile jobs in this coming century that don't have a strong basis in science and technology," he said. "New ideas mean new products and better ways of doing things, and that ultimately means jobs."

Professor Fell said that until now, NSW was widely perceived as lagging in the science stakes in comparison to other State Governments. "Other States have given science more prominence," he said. "Geoff Gallop is both Premier of WA and Minister for Science. Peter Beattie and Steve Bracks have both pushed their States to the front when it comes to investment in science. We look forward to seeing the detail of the programs the NSW Government will establish to support scientists and scientific research."

Professor Fell said he had written to the Premier last Friday about the performance of NSW in science. The letter read in part: "As an example of the State's low level of performance, I would cite the results of the recent CRC round, where 10 of the new CRCs are to be headquartered in Queensland, 6 in Victoria and only 4 in NSW. Other examples are the impetus that Queensland has given to biotechnology and Victoria's construction of a synchrotron.
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Whilst the State's key universities are successful in gaining Australian Research Council grants, there is not evidence of the same level of cooperation as exists in other States where the State Government has provided strong leadership."

He said there was a perception in the science community that NSW was more interested in real estate than science and technology. While other States had put dollars on the table in support of new centres of excellence, the NSW Government support had been equivocal. Professor Fell said the role and scope of the new Ministry had yet to be defined. "Medical research is critical, but science covers much more than that," he said. "I have discussed the announcement with the Premier's office, and I would hope that FASTS can work with the new Minister should the Carr Government be returned," he said. Professor Fell said it would be useful if all parties in the election made their positions clear on the proposed ministry.

For information: Toss Gascoigne (02) 6257 2891; 0408 704 442

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The Congressional Science Fellows Program

Australian Parliamentarians need more and better sources of scientific and technological advice!

You are invited to a seminar FASTS is organising at the Australian Academy of Science Shine dome in Canberra on Monday 12 May, at 5.45 pm.

For the last 30 years, the Congressional Science and Technology Fellows Program has been an impressive part of the daily life and decision-making in the US.

Over 1300 scientists and technologists have participated in the Program, bringing their scientific skills to Washington and working within the Congressional system to keep Members and Senators abreast of rapidly-moving events in science.

The scientists are attached directly to the staff of Senators or members of the House of Representatives, or to Committees attached to either House. They are recruited and paid for by the scientific societies, and their term of appointment is for a year. There are currently about 35 scientists participating in the program.

The Program has been successfully adapted by Switzerland, but would it work in Australia?

A seminar to explore this issue will be held at the Australian Academy of Science Shine dome on Monday 12 May, at 5.45 pm. It has two parts:

1. a brief snapshot of the current position of science and technology in Switzerland, and
2. an exploration of the US program. It was successfully adapted to the Swiss Parliamentary system two years ago - could it happen in Australia?
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Speakers

Dr Margrit Leuthold, coordinator of the Swiss Parliamentary Science Fellows Program, and Secretary-General of the Swiss Academy of Medical Science; and Dr Lesley Russell, the first Australian to be appointed as a Science Fellow in the American Program.

FASTS is organising a visit to Australia by 4 former US Science Congressional Fellows in June. Further information about the Program and this visit is on the FASTS' web site: www.fasts.org

Toss Gascoigne

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The Budget and science: FASTS

Australia's peak body for scientists and technologists has expressed cautious optimism about the science Budget. Dr David Denham, acting President of the Federation of Australian Scientific and Technological Societies (FASTS), said that scientists had some concerns going into the Budget.

"We were worried about CSIRO and the affect of reforms in the higher education sector, and whether funding promised under the "Backing Australia's Ability" package would be delivered on time and in full," he said. "On first examination, the Budget delivers a small increase in overall funding for science, and continues the next tranche of funding for the Australian Research Council and the Cooperative Research Centres Program beyond the timeline of BAA, so this is positive.

"While CSIRO will be funded for one year instead of its normal three years, the Government has assured us that this is to allow a series of reviews and inquiries to be completed," he said. "FASTS will take a close interest in the reviews."

"We welcome a small funding increase for CSIRO. This body should now be allowed a period of stability and certainty - it's been through tough times recently of change, revamp and inquiry."

Dr Denham supported the additional $61 million for Geoscience Australia to boost research in Australia's offshore petroleum basins. He also welcomed support for the rebuilding of Mt Stromlo, though he was surprised by the modest dollars involved. He understands that the Budget announcement has not closed the door on further Commonwealth funding for the rebuilding package.

The biggest unknown from the Budget is how the higher education reforms will affect science. Dr Denham noted the funding boost for the tertiary education sector as welcome and overdue, and said it will go some way to restoring the cuts made by the Government since 1996. "The package is heavily back-loaded, with only $69 million due before the next Federal election, so relief for Australia's universities is still on the horizon."
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"It's difficult to predict how science will be affected by the new arrangements," he said.

"Australia's long-term future is inextricably linked to our investment in science and research, but it is expensive to teach, and expensive to conduct research. Will universities have the incentives to encourage them to be active in these areas?"

FASTS also welcomed the expanded number of places for teachers, but also called for science and mathematics to be made a specific National Priority cluster.

The Budget partially addresses the issue of the research funding "cliff" - what happens in 2006 when BAA funding has run its course - through pipeline measures for continuing the expanded funding of the ARC, the Cooperative Research Centres Program and the START Program.

For interview: *Dr David Denham (02) 6295 3014*

For information: *Toss Gascoigne (02) 6257 2891; 0408 704 442*

SCIENCE NEWS 3 June 2003, issued by FASTS 4 June 2003

Science and Technology for the Social, Environmental and Economic Benefit of Australia

1. THE SCIENCE FELLOWS PROGRAM

FASTS is interested in exploring the possibility of adopting the US program in Australia. Over the last 30 years it has enabled hundreds of American scientists to work in the Congress for a year.

Australia needs a program like this. Only five current federal parliamentarians (out of 226 Members and Senators) are scientists, and yet our Parliament deals with science-based issues daily.

The Swiss have adapted the program for their Parliament, and last month Dr Margrit Leuthold spent two days in Canberra meeting parliamentarians and officials of Parliament. She talked openly about the Swiss experience, to people ranging from the Minister to the Clerk of the Senate.

In the week June 16, FASTS has organised five former US Congressional Science Fellows to visit Australia, to discuss their experiences with parliamentarians and officials of Parliament.

The Fellows will also spend time at leading Australian research laboratories in Sydney and Melbourne. There will be a public meeting at the Academy of Science's Shine Dome on Tuesday June 17 at 5.15pm.

More information about the program and the visit is at www.fasts.org

2. THE BUDGET AND SCIENCE

FASTS was briefed on the Budget by the Minister and officers of DEST.

Our media release expressed "cautious optimism". Funding under "Backing Australia's Ability" will be delivered in full, on time; and none of the publicly-funded research agencies was cut.

We were disappointed in the limited funding to re-build Mt Stromlo.

Increased support for the higher education sector is both overdue and welcome. It is not yet clear how the new arrangements will affect science. FASTS will take a close interest in a new review of funding arrangements for research agencies and universities. The full release is at available at www.fasts.org

A longer summary of the Budget by FASTS Vice-President David Denham is also presented on the FASTS web site.

3. WORKSHOPS FOR MEMBER SOCIETIES

Over 130 elected officers and executive officers of our Member Societies have attended FASTS workshops. They wanted better ways to deliver benefits to the individual scientists and technologists in their society.

Ideas from the workshops are currently being developed for the web, and will include:

- Planning for membership benefit
- Increasing input into policy and politics
- Mail merging to email
- Communication planning
- Attracting volunteers to run the society

4. INVITATION TO THE BOARD

The next Board meeting will be in Sydney on 4-5 August, and the Presidents of all Member Societies will be invited to join an open session of the Board meeting at 4 pm on Monday.

5. "SCIENCE MEETS PARLIAMENT" DAY

Registration for SmP 2003 will open in the next month, and available on the FASTS web site. This event has had a tremendous impact on Parliament, helping change the attitudes of Parliamentarians towards the funding and impact of science.

We are flattered to see the first of the imitators has sprung up!

FASTS has written to the Premier of NSW and his new Minister for Science suggesting that NSW holds a state version of SmP. Victoria is also looking at its own version; and Queensland ran one last year.

6. THE MAPPING EXERCISE

"Backing Australia's Ability" brought nearly $3 billion of funding into the Australian science and research sector over 5years. Now the Government is considering the next step.

The Mapping exercise aims to find out where new funds could most effectively be used. FASTS considers our 66 Member Societies do a great job of technology transfer through meetings and conferences, and surveyed Members for the Mapping Task Force.

The letter read: *"The impact of FASTS members on technology diffusion within Australia can probably be expressed in terms of 100 conferences and 700 technical meetings per year with up to 70,000 total attendees. This is a significant national contribution to Australia's efforts to maintain a strong, vibrant and environmentally sound modern economy. This contribution is made almost completely independently of direct Government support."*

7. INVITE THE MINISTER!

Ministers and Shadow Ministers are keen to receive invitations to address meetings organised by your Society. This provides, of course, a great opportunity to raise issues of concern to your members.

The way to start is an invitation faxed through to the office of the Minister.
Science Minister Mr Peter McGauran - fax 02 6277 7330
Shadow Science Minister Senator Kim Carr - fax 03 9639 3109
Democrat Senator Natasha Stott Despoja - fax 08 8232 7601
Other Ministers and their phone numbers are available at the Parliament House website: www.aph.gov.au

8. SUBSCRIPTIONS

Subscription notices will be circulated at the end of this month. The amount is based on the number of full members in the Society. In other words, honorary and student members should not be counted.

The number should be taken from the last complete year of the Society. If it runs on a financial year basis, it will be the number of members on 30 June 2003. If it runs on a calendar year basis, it will be the number on 31 December 2002.
The standard rate is $5 per member plus GST.

In June we will send all Societies a note to let them know what our record of their member numbers is. Some Societies will need to amend this figure. Subscription notices will be emailed to the President on July 1 (and copied to the Treasurer).

9. NATIONAL SCIENCE WEEK

National Science Week is an annual celebration of science, technology and innovation. It runs 16 - 24 August 2003, and Societies may like to get involved. For event information, ideas, contacts, promotional support and media advice, see www.scienceweek.info.au or email scienceweek@orac.net.au or telephone: 02 6205 0281.

10. OCEANS ELEVEN REPORT

The Australian Marine Sciences Association would like to highlight the recent release of the Oceans Eleven Report on the Implementation of Australia's Oceans Policy and Ecosystem-Based Regional Marine Planning by the Australian Conservation Foundation (see www.acfonline.org.au/asp/pages/document.asp?IdDoc=1251).

11. UNIVERSITIES BEING COMMERCIAL

The FASTS policy 3.4.4 reads: "Combine university technology-transfer arms to concentrate scarce expertise, with scientists able to approach any of them for advice."

It is good to see this idea has registered. The Canberra Times reported a speech to the National Press Club by Chief Scientist Robin Batterham as follows: "... Dr Batterham got down to the difficult detail by proposing that Australia's 38 universities should not maintain individual commercialisation units. "It seems madness that every institution, be it a small regional university, a large one, or a government-funded research agency, looks to having its own commercialization facility," he said. "He suggested that the nation's researchers would be best served by just five commercialisation bodies. ..."

12. HONOURS FOR SCIENTISTS

In the last Australia Day Honours list, scientists were conspicuous by their absence. Has your Society considered nominating a distinguished member for an award for his/her outstanding achievement? Your President, for example? Details of the nomination process are given on www.itsanhonour.gov.au/about_honours.html

13. THE PM ON SCIENCE

An extract from the Prime Minister's CEDA speech of 20 November 2002 reads:

"Let me turn to an equally vital area of Government strategic policy interest, and that is science and innovation. Investment in science and innovation is an investment in Australia's economic and social prosperity.

"New knowledge and new ways of doing science enable us to push the boundary of what is possible with our resources
and help build solutions to issues in areas such as health, the environment and industrial development."

The full speech is shown at www.pm.gov.au/news/speeches/2002/speech1996.htm

CONFERENCE CAPERS

LARS2

The Second International Symposium on the Management of Large Rivers for Fisheries (LARS2): 'Sustaining Livelihoods and Biodiversity in the New Millennium', was held on 11 to 14 February 2003 in Phnom Penh, Kingdom of Cambodia.

LARS2 was attended by more than 250 delegates from more than 40 countries, including academic, agency and NGO staff. Information was presented on over 70 different rivers worldwide. John Koehn and Angela Arthington represented the CRCFE; Angela was also a member of the scientific committee.

The original Large rivers symposium (Lars1) was held in 1984 and the proceedings produced the Flood Pulse Concept (FPC) which, despite being based on tropical lowland rivers, has been used to describe the functions of many other types of Australian rivers. Recently the applicability of this concept to Australia has been questioned. The use of environmental water as a means of rehabilitating fisheries makes it important to the understanding of such concepts and their applicability in Australia. This second symposium attracted the attendance of many of the world's 'gurus' on large rivers. Being based on the Mekong, one of the world's most productive rivers, field visits allowed a scientific perspective to be gained on such a large tropical river and the fishery management issues relating to such a river system in a developing country.

Highlights:

- field excursions to the Tonle Sap river and lake and biosphere reserve, the floating Vietnamese fishing village on Tonle Sap lake, Gecko environment centre, the Pek Pnov fisheries and Kompon Chnang floating fishing village, and local fish markets in Phnom Penh, Siem Reap and other villages.
- a visit to the Mekong Rivers Commission and meetings with Drs Chris Barlow (Fisheries program) and Ian Campbell (Environment program).
- attendance at the launch of the Mekong River Awareness kit.
- meetings and discussions with leading world figures regarding the FPC and Australian rivers: especially Welcomme, Junk, Winemiller, Arrington, Cowx, Lorenzen, and Schramm.

The abstracts, most draft papers and the conference schedule can be viewed at www.lars2.org

Angela Arthington

British Ecological Society

I recently returned from a cold and wet but productive trip to Europe visiting several labs and attending the annual conference of the British Ecological Society (BES). I initially spent four weeks at King's College, London, where I worked with Dr George Perry developing a landscape-scale model of fish population dynamics in intermittent lowland streams. The model, being developed as part of project B706, examines the response of fish populations in the Granite Creeks system to changes in the number of summer refugia, such as might occur with changes in climate, or as a result of stream restoration.

Moving north to York, I found that the British Ecological Society members proved a novel audience, somewhat unprepared for the havoc wrought by an Australian drought on restoration work in the Granite Creeks system. Nevertheless, my presentation there was received with great interest, and certainly contrasted strongly with talks focussing on the rain-soaked British Isles. The highlight of the conference, for me at least, was the Landscape Ecology session, which featured talks on both terrestrial and aquatic ecosystems and included studies ranging in scale from metres to hundreds of kilometres. With the common thread of spatial processes running through most of these talks, this session highlighted the commonality in the key ecological processes relevant to a vast range of ecosystem types, both wet and dry.

My final stopover was a visit to Sergi Sabater at the University of Girona in Spain, where I spent a week following up a collaborative algal colonisation experiment conducted as part of the Granite Creeks Restoration Project (B200) when Dr Sabater visited Monash University in 2002/2003. Researchers at Girona were all too familiar with the dynamic nature of streams from Mediterranean climates, and were extremely interested in the presentation I gave there summarising our work in the Granite Creeks system. With several of the Girona researchers having visited Monash, the links developing here will hopefully continue to be productive ones.

The assistance of the CRCFE in allowing this trip to occur is much appreciated. The trip was highly enjoyable, and allowed some collaborative work to progress at a rate that would not otherwise have been possible.

Nick Bond

"Air Waters Places: A Transdisciplinary Conference on Ecosystem Health in Australia"

This conference, organized by Glenn Albrecht of the School of Environmental and Life Sciences, University of Newcastle, was held from April 14 -16, 2003 and was aimed at extending the achievements of the International Society for Ecosystem Health in Australia with its Brisbane 2000 International Symposium and the Indo-Pacific Ecosystem Health Conference at Edith Cowan University in 2002.

Most of the conferences we attend are typically informative, social and thought-provoking; seldom do they evoke other emotions such as horror, empathy, sadness, or hope. Yet for me, this eclectic group of speakers wrought such emotions during the two-day conference that spanned disciplines of ecosystem health, human health, social justice, eco-capitalism, and sense of place - with a healthy dose of watery topics as well. As we waited for the conference to begin, we were surrounded by beautifully-painted mannequins of an installation by Anne Llewellyn titled 'Portraits from Nature' depicting ecological events from her rural property, observed over some 10 years. Not only did this enhance the atmosphere of the 'tea-room' but it also gave you someone to talk to during lulls between papers.

Prof. David Rapport (Canada) commenced the keynote addresses with a synthetic talk that traced the history of the concept of ecosystem health of which he has been a founding member and staunch advocate for over 30 years. He wove a web integrating ecosystem health based on biophysical measures, socio-economics, cultural aspects and human health to show how loss of social cohesion can result in dysfunctional landscapes and vice versa, and used local examples from the Newcastle area to illustrate his point.

What happened next was completely unexpected - at least by me. Like a whirlwind, Helen Caldicott (physician and author of 'New Nuclear Danger') assailed our senses in an articulate and disturbing talk about US weapons and their devastating effects - not only on humans, but also basic human rights such as access to water supplies and waste disposal. I alternated between horror as she graphically described the human tragedy and later, some despair as she outlined the residual effects of the use of uranium-depleted materials in a desertified landscape. The stunned silence from the audience when she finished indicated that I was not the only one struck by her oration, and it took some well-chosen words from Glenn to restore hope and movement onto the next session.

Much of the rest of the day was more conventional papers, and I mention a couple here that struck me. The first was by Colin Butler (ANU), discussing human carrying capacity (HCC) of Australia and suggesting that HCC was controlled by more than ecological resource limits of water and space; aspects of Australia's infrastructure, morale, personal debt, and ageing population are also ingredients of the complex population debate. I enjoyed Alan Jones' (Australian Museum) presentation of a 'utilitarian view' of ecosystem health where health could be assessed on the basis that desired goods and services are being delivered.

Other talks that day dealt with the thorny issues of actually applying indicators of ecosystem health, and I found the diversity of approaches (in estuaries) to be very revealing in the spectrum of choices from almost solely biophysical through to cultural and social requirements. I don't envy anyone seeking to produce a single guide to assessing 'estuary health' based on the range of views currently available.

The day's proceedings closed with an address by Pierre Horwitz (ECU) blending ecological responses at several scales to fire regimes in the south-west with video-excerpts of recollections by farmers of the devastating loss of land after government-induced clearing in the late 1960s-early 1970s (extracted from '*A Million Acres a Year*'). How could one not be touched by some of these stories from farmers and their spouses? But the analysis went beyond the stories because they were used to illustrate the relationships between the health of people, community well-being, and environmental condition, and the way responsiveness to a 'sense of place' determines the likelihood of succumbing to changes or adapting to them.

The following day's keynote addresses commenced with author Mary White presenting a succinct history of Australia's environmental changes and European impacts. This distillation of her best-selling sagas was articulate and seamless as she single-handedly reviewed an immense topic and - to my special delight - even mentioned the hyporheic zone! Writing her first book at 60, this remarkable lady shows no signs of slowing down 16 years later and I found it a special pleasure to talk with her several times during the conference as she braced herself to launch her latest book 'Earth Alive' in late April. Mary was followed by Tony McMichael (ANU) who presented a range of examples of ecological and human health related responses to global climate change, including direct threats to Australia from various diseases mediated by mosquitoes to a shortening of the snow season (I heard audible gasps from several yuppies in the crowd). Per-capita cereal grain yields continue to decline in the last 5 years while extremes of weather apparently occur with increasing regularity and severity.

The rest of the day was taken with three parallel sessions, and again, I found some encouraging stories to take away with me. One theme that emerged from several case studies of community involvement in catchment management was the importance of 'subtle leadership' in a collective sense. It seemed that the lasting associations of communities and their creeks arose from effective integration of conventional water quality sampling with social and cultural activities of door-knocking to encourage people with water frontage to look after and sample their own creek, and collective decision making where dominant personalities were rare or absent. I also detected an increasing frustration from communities collecting water quality data that were then being ignored or inadequately analysed so that members of the community questioned the 'information content' of their data.

The day concluded with an ambitious three-speaker 'tag team' on water issues and ecosystem health. Andrew Brooks (Griffith Uni) began proceedings by reviewing geomorphological changes in response to vegetation removal along the eastern seaboard, and ascribed most of the gullying, incision and sediment deposition now so widely evident to the removal of or change in vegetation in the catchment.

In places, even if vegetation was now restored, channel capacities and forms may take more than 30 thousand years to recover. Andrew Boulton (UNE) followed this theme of loss of geomorphic complexity by outlining some of the potential ecological responses with an emphasis on the severance of surface and subsurface (hyporheic) systems in rivers where widespread sedimentation has occurred. Despite the apparent increase in hyporheic zone with deposited sediments, exchanges caused by topographic complexity have diminished and the impacts may extend well beyond the surface environments with which we are more familiar. Eric Hatfield (Healthy Rivers Commission) concluded with a manager's viewpoint, emphasizing the importance of taking a broad view first (conceptual stage), followed by efforts to classify and group the issues (qualitative) and then focus on areas needing research (quantitative) in a 'plan-do' cycle. While holistic management is an intuitively appropriate goal, it is also resource hungry so this demands a pragmatic approach to allocating efforts and priorities.

The final day culminated in a visit to Tamburlaine winery in the Hunter Valley to eat lunch and sample wines from this winery that is leading the push for sustainability. Participants were shown a variety of energy- and resource-saving approaches that seek to enhance the sustainability of wine production while not compromising quality, and there was a sobering talk about the economics of trying to do this against a background of tight financial constraints and limited incentives for sustainability in this industry so far. Overall, Glenn did a brilliant job drawing this conference together, constantly espousing his belief that 'all would self-regulate' and despite minor glitches with computers and lights, the conference was an enjoyable one, provoking much 'healthy' debate. I understand that Glenn plans to put together a proceedings from this event so stay tuned for some provocative reading.

Andrew Boulton

FORTHCOMING CONFERENCES/WORKSHOPS

OVERSEAS

2003 – International Year of Freshwater

The Gordon Research Conference on Permeable Sediments is to be held 15 to 20 June at Bates College in Lewiston, Maine, USA. Information about conference location, travel logistics, conference format and online applications can be found at: http://www.grc.org/

Third Symposium for European Freshwater Sciences (SEFS3) is to be held at the University of Edinburgh from 13 to 17 July (excursion on 18 July). The Second Circular is now available at the SEFS3 website at http://www.sefs.info/

Organic Phosphorus 2003. 13 to 18 July to be held at Mont Verita, Ascona, Switzerland. See the Workshop website http://www.nwisrl.ars.usda.gov/OrganicP2003/ for details on how to register. Further information from Dr Darren Baldwin (Darren.Baldwin@csiro.au).

Symposium for European Freshwater Sciences, to be held from 13 to 18 July at the University of Edinburgh, UK. Web address: http://www.sefs.info/

Fourth International Symposium on Phosphate in Sediments. Organised by the Asociaci F3n Espa F1ola de Limnolog EDa the University of Sevilla, together with the University of Granada. This meeting will take place in Sevilla (Spain) from 9 to 12 September. If you are interested inform Laura Serrano (serrano@us.es) or Han Golterman golterman@wanadoo.fr

The 17th Biennial Conference of the Estuarine Research Federation (ERF) will be held 14 to 18 September, at the University of Washington in Seattle, Washington. The conference's theme is Estuaries on the Edge: Convergence of Ocean, Land, and Culture. For more information about ERF, please contact Joy Bartholomew at jbarth@erf.org or visit their web site: www.erf.org

International Conference on Water-Saving Agriculture and Sustainable Use of Water and Land Resources, to be held in Yangling, Shaanix, P.R. China from 26 to 29 October. Further information from the Conference Secretariat, Prof. Kang Shaozhong, kang62@public.xa.sn.cn

2004

29th International Association of Theoretical and Applied Limnology 8 to 14 August. (SIL): Lahti, Finland. Website: sil2004@latkk.helsinki.fi

7th INTECOL International Wetlands Conference at Utrecht University, The Netherlands, July 2004. This Conference will be organized under the auspices of the International Association of Ecology (INTECOL) under the title "Wetland Science and Water Resources Management". Please visit the web site and bookmark it: <http://www.bio.uu.nl/INTECOL> www.bio.uu.nl/INTECOL

AUSTRALIAN

2003 – International Year of Freshwater

The Ninth International Conference on River Research and Applications - is being organised and sponsored by the CRCFE. The conference will be held 6 to 11 July in Albury, NSW. See http://www.conlog.com.au/NISORS/ for further information.

MODSIM 2003, The Biennial Congress of the Modelling and Simulation Society of Australia and New Zealand "Integrative Modelling of Biophysical, Social, and Economic Systems for Resource Management Solutions", to be held from 14 to 17 July at Jupiter's Hotel and Casino, Townsville.

River*symposium* 2003 Sixth International River Management Symposium, "Urban Rivers - balancing the expectations", to be held from 2 to 5 September in Brisbane. See www.riverfestival.com.au/symposium

2003 National Conference of the United Nations Association of Australia will be held over two-days in Perth (WA) on 26 and 27 September. The theme of the conference is Fresh Water: *We'll all drink to that!*, with a focus to highlight the importance of establishing and maintaining fresh water resources.

The 3rd **Victorian Flood Management Conference** will be held in Horsham, Victoria, on the 8 to 10 October. The theme for the 2003 Conference is ***Healthy Floodplains Wealthy Future.*** .See: www.vicfloodconference.com.au

Integrated Catchment Management (ICaM) - 2003, organised by the Australian Water Association NSW Branch, to be held at the University of Western Sydney on 26 and 27 November. Further information from icam2003@awa.asn.au, or phoning (02) 9330 9458.

A Memorial Symposium and Field Trip in Honour of Bill Williams - is being organized by the University of Adelaide (to arrive in Warrnambool for the Joint ASL/NZLS meeting) from 28 to 30 November. For more information contact Mike Geddes on mike.geddes@adelaide.edu.au

Joint 42nd Annual Australian Society for Limnology Congress and The New Zealand Limnological Society, to be held in Warrnambool, Victoria from 1 to 5 December. Further information from Belinda Robson (brobson@deakin.edu.au), Phone (03) 5563 3330 or Fax (03) 5563 3462.

Symposium on Urbanization and Stream Ecology, to be held at the University of Melbourne from 8 to 10 December. Deadline for abstract submission is 1 July 2003. See http://www.conferences.unimelb.edu.au/urbanization_and_stream_ecology For further information contact: Conference Management, Old Physics Building, The University of Melbourne Victoria 3010. Phone (03) 8344 6389; Fax (03) 8344 6122 or Email: bhewitt@unimelb.edu.au

ESA ECOLOGY 2003 - Ecological Society of Australia's 28th Annual Ecology Conference will be held at the University of New England, Armidale from 8 to 10 December.

2004

International Commission on Irrigation and Drainage 2nd Asian Regional Conference, to be held at Moama (NSW) from 14 to 17 March. The theme of the conference is Irrigation in a Total Catchment Context, Sharing the River.

4th International Symposium on Extant and Fossil Charophytes, to be held at Robertson (NSW) from 25 to 27 September. Check the Symposium website at: www.uow.edu.au/science/geosciences/conferences/irgc04

ASL Volunteers

The following members have volunteered to speak as experts on behalf of the ASL.

If you wish to be included on the list or amend your contact details, please contact:

Dr Richard Marchant (ASL Secretary)
Email: rmarch@museum.vic.gov.au

Prof Angela Arthington:
in stream flows, ecology of exotic fishes, conservation of rare fishes.
Centre for Catchment & In-Stream Research, Griffith University, Natham Qld. 4111.
Phone (07) 3875 7403, Fax (07) 3875 7615, email: a.arthington@mailbox.gu.edu.au

A/Prof Paul Boon:
bacteriological issues, wetlands.
Environmental Management, Victoria University of Tech., PO Box 14428 MMC, Vic. 3000.
Phone (03) 9365 2214, Fax (03) 9365 2465, email: paul.boon@vu.edu.au

Dr Andrew Boulton:
intermittent streams, hyporheic zones, Flinders Ranges.
Department of Ecosystem Management, University of New England, Armidale, NSW 2351.
Phone (02) 6773 3760, Fax (02) 6773 2769, email: aboulton@metz.une.edu.au

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